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ABSTRACT

This health curriculum, developed by an elementary school faculty, provides three sets of lesson plans. Lesson plans include lessons taught by the school nurse, resource teachers, and classroom teachers. The topics considered in the lessons taught by the school nurse include hygiene, germs and diseases, safety, nutrition, and drugs. Topics explored in the resource teacher lesson plans include teeth, bones, sound, individual differences, the digestive system, and the circulatory system. Resource teacher lessons also provide interdisciplinary links with physical education and music. The lessons taught by the classroom teacher are separated by grade level. Prekindergarten focuses on the five senses, kindergarten learns about nutrition, first grade focuses on safety, second grade reviews playground safety and dental care, and third grade examines fire safety. Details for staging a health fair and for implementing a health tip of the week strategy are also provided. (DDR)

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Beauvoir Health Curriculum

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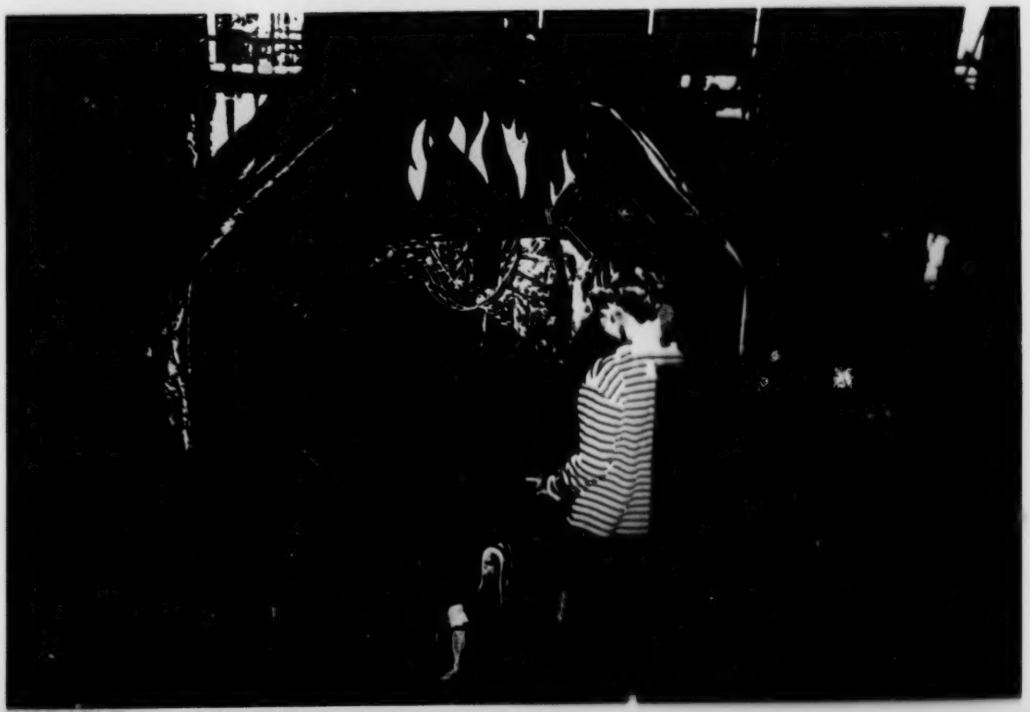
DIAL
911
Crawl

Fire Safety Obstacle Course



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A Visit to the Dentists-How to Floss Teeth

KEEP YO
ALTHY

Taste Testing Delicious and Nutritious Snacks

FOOD PYRA
Welcome Bea
HEALTHY

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Learning How "Germs" Are Spread

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Anatomy Aprons

Learning About Hygiene-How to Bathe

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The Beauvoir Health Curriculum book was written by members of the science committee during the summer of 1995, and updated by committee members in the fall of 1997. The following teachers have been involved in writing sections of the curriculum:

Sandy Cepaitis and Mary Ann Bliss - Pre Kindergarten
Carol Paige and Sandy Cepaitis - Kindergarten
Karen Falk - First Grade
Cornelia Atkins, Brooks Hundley, Amy Hoerman Heilbrun - Second Grade
Jan Molnar - Third Grade
Judy Dunham - Music and Drama
Lydia Cox, Stacy Nobrega - Physical Education
Mary Marcoux and Sylvia Thompson -Science
Heidi Tryon - School Nurse

Sylvia Thompson has chaired the science and health curriculum committee, and served as editor for the book.

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Introduction

Health is something that most of us take for granted, until we don't have good health. Then it often becomes the only thing that we can think about. Some causes of poor health such as genetic predispositions and some age related health problems may be unavoidable, but many times we can choose to take responsibility for our health. The choices we make can be learned in childhood. Many adults are surprised to learn that for children the number one health related problem is accidental injury. Many accidents are preventable if children learn safety rules like how to cross a street safely, how to ride in a car safely, and how to avoid burns and poisonings. Good nutrition, sleep and fitness influence our daily functioning enormously. Poor health has enormous economic and social costs.

For years many public schools have taught health classes using textbooks and/or workbooks . Many independent schools have not taught anything at all about health. At Beauvoir School, an independent primary school in Washington D.C. for 350 students from prekindergarten to third grade, health was not taught in a systematic fashion. Some teachers stressed certain hygiene practices; others stressed nutrition. Some mentioned stranger safety and drug awareness. For the children it was perhaps a hit or miss proposition whether they would get the information that they needed to make good decisions regarding their health.

The science curriculum committee was given the challenge of examining what was being done in the area of teaching health education at Beauvoir School. The committee concluded that a more systematic approach to instruction needed to be implemented. Thanks to several days of release time during the school year, and a grant from the Parent's Association for work done in the summer of 1995 we developed a health curriculum which we feel is more interesting and dynamic than workbook lessons, but provides the children with an introduction to important life lessons, and information on which to base decisions that could have long term repercussions.

Our committee began by determining what areas of health were currently being addressed by teachers at Beauvoir, what was being done across a grade level, and what was being done in one classroom only. (There are four classes of 20 children each at a grade level). We also polled the teachers to find out what topics they felt needed to be addressed at their grade level. We examined the national standards for health education. Based on our findings we devised a four prong health curriculum.

First, the school nurse makes visits to each classroom to cover each of the following five topics: nutrition, safety-as a pedestrian, cyclist and passenger in a car and safety from strangers, hygiene, germs and diseases, and drug awareness. Her lessons are designed to repeat and reinforce information and to build from year to year. Some of these important lessons are learned more easily from someone other than a nagging parent.

Second, the grade level teachers have continued their promotion of mental and social health with self-esteem building activities such as the "Star of the Week" and other recognitions. Beauvoir students are taught the Beauvoir life rules: Respect, Responsibilty, Kindness and Honesty. In addition, each grade level representative to the curriculum committee developed lessons to be taught by all four teachers at their grade level. Prekindergarten has focused on five senses and how they help our bodies. Kindergarten has focused on the food pyramid and the importance of good nutrition. First grade learns about many kinds of safety. First and third grade buddies learn about fire safety activities together. Second grade students examine playground safety and dental care. The goal is for teachers at each grade level to cover particular topics so that a child passing through the school will have consistently received information about a variety of important topics.

Third, the resource teachers teach health related topics. The sports teachers emphasize fitness at all grade levels. They have also developed classes on recreational safety and fire safety, such as an obstacle course where the children must respond to possible real life emergencies. The science teachers emphasize the scientific basis for good nutrition, exercise, avoiding drugs and poisons, cleanliness and rest in maintaining healthy bodies. The music teacher has written songs and raps to teach the children about dental care and seat belt safety. To accomodate the research of different learning styles the goal was to devise lessons for the auditory, visual, kinesthetic and other kinds of learners.

Although the health lessons we have written are taught by a variety of teachers, and there is some overlap of material between different teachers, there is no reason that all the lessons could not be taught by a classroom teacher in a self-contained classroom. Also, we have indicated the grade levels that we teach these lessons. Most are flexible and could go up or down as necessary.

Many of the choices children face regarding health issues will be made during hours they are away from school. Parents are the fourth prong of our health education curriculum. One method for reaching parents has been through the health "Tip of the Week" in the school's weekly newsletter. Our "Tips" are listed at the back of the book.

The committee thought a fun filled one day health fair would draw attention to our efforts and give us all a change of pace from the regular school day. We stressed that just as Earth Day is Every Day, we wanted the children to be making healthy decisions every day, not just on health fair day. The children enjoyed making murals and big books and preparing other materials for the fair. The children learned to crawl under smoke, answer safety riddles, dramatize a visit to the dentists office, play health jeopardy, learn about lice, have their pulse measured before and after a wonderful, exhausting obstacle course, taste and vote for favorite healthy snacks, etc. A description of how our health fair was organized is in the book, and suggestions for alternative ways of holding a fair.

Our school has a cafeteria lunch. A large size (2 meters tall) food pyramid is on display in the school cafeteria each day, and the children are responsible for placing pictures of foods from that day's menu into the appropriate places. Discussions at the lunch table often focus on the pyramid, and where a particular food that is being served that day would be classified. The kitchen staff reports that eating habits have definitely changed, and the children are spurning the fat laden foods, while demolishing all available salad material. We hope that the visual pyramid helps the children to put their whole day's diet into perspective.

We feel that this curriculum has made a positive change in our students lives. Anecdotal reports and a pre- and post-test assessment confirm our feelings. When we began our search for good materials in health education we felt frustrated that there did not seem to be a comprehensive yet inexpensive and flexible curriculum for early chlidhood health education. We have written this curriculum in the hopes that others can benefit from our research and teaching experiences.

LESSONS TAUGHT BY THE SCHOOL NURSE

HYGIENE

Although children may have been exposed to television and print commercials for thousands of different personal care products they need to understand that the emphasis on cleanliness should be from a health point of view, not for cosmetic reasons. Children need to begin to take responsibility for their own grooming, and develop an understanding of why good grooming is important to their health and others around them.

GRADE LEVELS: prekindergarten and kindergarten

OBJECTIVES:
To understand the importance of cleanliness (body and mouth)
To improve personal hygiene

MATERIALS:
toothbrush
toothpaste
teeth model
combs
flour paste

PROCEDURE:

Discuss what is meant by "clean" and "dirty". Remind children that bodies and clothes need to be clean to remain healthy, keep germs away, smell nice, and to help people feel good about themselves. Some of the ways to keep clean are to take a bath each day or at least every other day, keep toenails and fingernails clipped, wash hair at least three times a week, brush teeth several times a day and to wear clean clothing daily.

Ask "Why is it necessary to change clothing daily?" (especially underwear and socks) These items cover parts of the body that may be kept warm, dark and moist and germs can breed in this environment. To keep healthy and germ free it is necessary to bathe frequently and change clothing daily.

Ask "Why should teeth should be brushed 2-3 times daily?" Accept all reasonable answers and explain that bacteria are a kind of germ that can grow in the mouth and cause teeth to decay. Humans cannot grow new teeth. Humans need teeth in order to be able to eat and to speak properly. Counsel the children to use a pea-sized amount of toothpaste and not to swallow the toothpaste. It is important to rinse and spit after brushing. Children should also be told to brush their tongue from back to front, and gently brush over their gums.

Demonstrate proper tooth brushing by either applying mashed banana to poster board and letting dry or flour paste to combs and letting it dry. Let children brush with toothbrush and water alone, and then toothbrush with toothpaste. (If the class is short on time it is possible to use a dry toothbrush and clean combs for this exercise). Discuss how to brush correctly in an up and down motion, making sure to get all surfaces. Discuss replacing toothbrush frequently, especially after having a cold or illness. Discuss the importance of a good diet for teeth. Calcium rich foods such as dairy products and green vegetables are good for the teeth. Sticky, sweet snacks should be avoided, especially between meals or if it is a long time until teeth can be brushed.

EXTENSIONS:
-Have a display of different health care products. Call on children to describe what they are and what they may be used for (for instance a toothbrush, toothpaste, dental floss, soap, shampoo, conditioner, hairbrush, comb, tissues, fingernail scissors, clippers, brush, cotton swabs, first aid cream, antibacterial spray etc.) Create a good grooming habit check list. (See the lesson for first grade for an example).
-Sing the song "This is the Way We..." with appropriate words and motions for brushing teeth, brushing hair, washing hands, shampooing etc.
-Show pictures from magazines of people with and without good grooming. Have students identify whether each person is well groomed or not, and if not, what steps they could take to improve their grooming.
-Discuss how teeth loosen and fall out at age 5-6 so that adult teeth can come in. Humans only have 2 sets of teeth in lifetime-so children should take care of them! The bottom middle two teeth fall out first followed by top middle.
-Invite a dentist or dental hygienist to visit the class.

GRADE LEVEL: first

OBJECTIVES:
To understand the importance of cleanliness
To learn how to correctly shampoo hair and clean the body
To learn proper oral hygiene

MATERIALS:
Rubber doll with hair (soiled)
basin, water, soap,shampoo, towels, comb, wash clothes
combs and toothbrushes

PROCEDURE:

Explain that the skin is a very special organ. It protects the body, controls body temperature, and has nerves in it that send messages to the brain about heat/cold or pain. Germs can enter the skin through cuts. By keeping the skin clean it is possible to cut down on germs entering the body, and also to smell and look better.

The hair has oil glands that keep the hair from becoming dry. By brushing hair daily the oils can be distributed all over the hair. After a few days the oils build up and trap dirt and need to be washed away.

Demonstrate the following method for hair washing. Begin by wetting the hair thoroughly, then pour out a small handful of shampoo into the palm. Rub shampoo into the hair and scalp of the doll with the fingertips and lather up for a couple of minutes. Rinse, shampoo and rinse again. Hair should feel squeaky clean. Make sure to rinse out all the shampoo. Shampoo left in the hair may make the scalp itch and will make the hair dull, not shiny.

Demonstrate how oil on a piece of fake fur will not wash out with plain water. Soap is necessary to break down the oil and wash it away.

Group children and have them practice washing dolls. Each group receives a basin of warm water, rubber doll, soap, shampoo, comb, brush, towel and wash cloth. Instruct students to wash the skin, shampoo hair, comb hair and call out "clean" when they are ready for inspection. Rate the doll's cleanliness and discuss how to improve hygiene.

Demonstrate the special shampoo to be used if there is lice, and special comb to be used by parents.

Have a display of different health care products. Call on children to describe what they are and what they may be used for (for instance a toothbrush, toothpaste, dental floss, soap, shampoo, conditioner, hairbrush, comb, tissues, fingernail scissors, clippers, brush, cotton swabs, first aid cream, antibacterial spray etc.) Create a good grooming habit check list.

For example:

Good Grooming Habit Check List

☐ Brush teeth at least twice a day

☐ Wash hands before eating

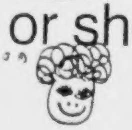
☐ Wash hands after using toilet

☐ Brush hair twice a day

☐ Wear clean clothes every day

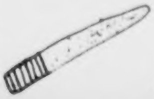
☐ At least every other day bathe or shower

☐ Wash hair three times a week



☐ Cut toenails and fingernails as needed

☐ Clean under fingernails



Brainstorm with the children what grooming activities they should engage in each and every day, and every few days. Make copies of the list and have the children take home the list.

Remind children that another way to keep the body healthy is to take care of the teeth. It is important to take care of the teeth because humans only get two sets in their lifetime. Once those are gone, no more can be grown.

Whenever food is consumed small pieces of food get caught between teeth. These small pieces of food, along with a kind of germ called bacteria may form plaque, a sticky material, that can cause cavities or holes in the teeth. It is important to brush away the plaque and then floss to remove any plaque or food that is left after brushing. To brush use an up and down motion. To floss wrap the dental floss around a finger from each hand. Look into the mirror to help guide the floss between the teeth gently down to the gums. Use floss to scrape the sides of teeth but not the gums.

Have children practice tooth brushing techniques on combs (either dry, or ones that have had a flour/water paste applied and let dry). Discuss ways to improve brushing and flossing.

Discuss ways to keep teeth healthy, making a list of childrens' rules on the board. The list should include:

brushing teeth after meals, at least 2x per day
if unable to brush, rinse with water after snacking or eating
flossing teeth once a day
eating foods from the milk group each day
eating fruits to have healthy gums
eating fewer foods made with sugar
chewing sugarless gum if you chew gum
visiting the dentist every six months for checkups

EXTENSIONS:

-Show pictures from magazines of people with and without good grooming. Have students identify whether each person is well groomed or not, and if not what steps they could take to improve their grooming.
-Examine advertisements from magazines for different health care products. Does the ad make the children want to buy the product? How would using that product help a person to stay healthy?
-Have the children create their own advertisements for different health care products.
-discuss ways different animals keep clean such as monkeys grooming, cats licking, snakes shedding skin, birds taking bath in water, elephants taking dust baths, fish that eat algae off of other fish, etc.

GRADE LEVEL: second

OBJECTIVES:

To understand the importance of cleanliness

To understand the transmission of lice
To understand why and how teeth must be brushed
To discover how flossing cleans teeth

MATERIALS:
collection of health care items (soaps, brush, toothbrushes, toothpaste, clippers, dental floss, comb, etc.)
copies of cartoon on lice life cycle
small red circles cut from felt
dolls for demonstration
hats, hair decoration, pillow

PROCEDURE:

To introduce the general topic of hygiene ask "Why do people use all these different things?" (Accept all reasonable responses) These are all items used to keep human bodies clean and healthy. By keeping clean humans can make sure that fewer germs get into our bodies to make us sick., we can also make sure that we feel good about ourselves, that we smell good, and that other people enjoy being around us. There are many different choices that we can make when we go to buy these things, and no reason to spend lots of money on fancy soaps or shampoos when simpler ones will do, but we do need to use all of these things to keep us clean and healthy. Have the children brainstorm items to include on a good grooming checklist. (see sample in preK, K and first grade sections. Make copies and send home.

To introduce the topic of lice read the cartoon together as class.

Explain that we are going to do a demonstration to see how those lice can travel from person to person. Place red felt dots on a doll's head. Explain that lice are barely visible with the eyes, but that the red felt dots represent head lice. Place different items such as hats, scarves, brushes etc. on an infested doll and then transfer the item to a different doll. Any red felt dots that travel to the other doll's head are like head lice that have been transferred to a new host. Each female can lay hundreds of eggs that will grow into adults that can lay hundreds more eggs etc.

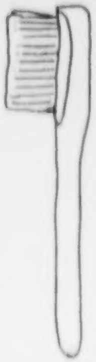
Ask "Why is it a problem to have lice?" Accept all reasonable responses. Be sure that children mention that lice suck blood and may spread disease, and make their victims very itchy and uncomfortable.

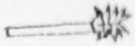
To introduce the topic of dental care ask the children "Why is it important to take care of teeth?" Accept all reasonable responses, making sure that children mention that humans only get two sets in their lifetime and cannot grow more.

Whenever food is consumed small pieces of food get caught between teeth. These small pieces of food, along with a kind of germ called bacteria may form plaque, a sticky material, that can cause cavities or holes in the teeth. It is important to brush away the plaque and then floss to remove any plaque or food that is left after brushing. To brush use an up and down motion. To floss wrap the dental floss around a finger from each hand. Look into the mirror to help guide the floss between the teeth gently

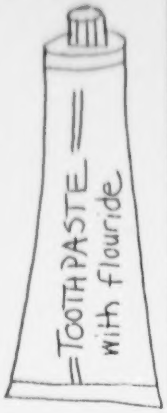
Dental Health Tips

1. THE TOOTHBRUSH

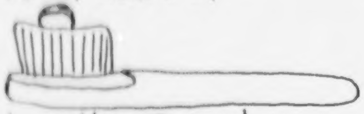


The brush should be soft and dry. Use a proper child's size toothbrush. Change the toothbrush when it becomes worn out  or after an illness. Toothbrushes should be changed every few months.

2. THE TOOTHPASTE



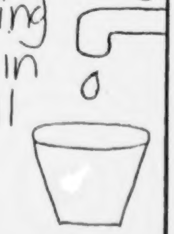
Use toothpaste with flouride. Use only a pea size amount for children. Use caution not to swallow the toothpaste. Be sure to brush all surfaces of



all teeth. Brush... rinse... and spit.

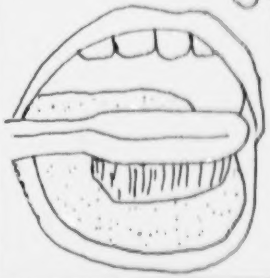
3. THE HOW'S & WHEN'S OF BRUSHING

Brush at least twice a day; it is best to brush after each meal and after eating snacks. If unable to brush properly, swishing water around in the mouth will help to rinse the teeth.



4. THE TONGUE

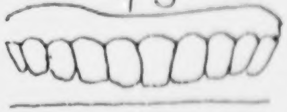
The tongue is importan to clean. It is like a ru under the table. If it's not cleaned, it will collect dirt (and germs). Stick out your tongue and gently brush i from the ba to the front.

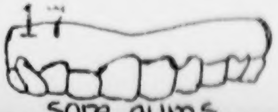


5. THE GUMS

Healthy teeth need healthy gums. Gums need massaging so they can stay strong enough to support the teeth.

healthy gums

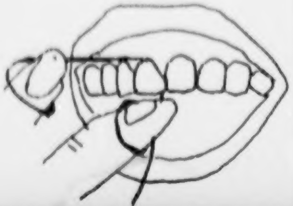




sore gums

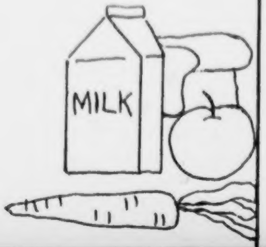
6. FLOSSING

Plaque is a film that forms on and between the teeth. Plaque is harmful for the teeth. It is important to floss once a day. This may require the help of an adult.



7. NUTRITION

Foods high in calcium are good for the teeth. Avoid eating sticky, sweet treats. Snacks such as fruits and vegetables are good for the teeth, too.



8. THE DENTIST

Visit the dentist twice a year. The teeth need regular cleaning and checkups for cavities.

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down to the gums. Use floss to scrape the sides of teeth but not the gums.

Have children practice tooth brushing techniques on combs (either dry, or ones that have had a flour/water paste applied and let dry). Discuss ways to improve brushing and flossing.

Discuss ways to keep teeth healthy, making a list of childrens' rules on the board. The list should include everything mentioned in the prekindergarten and kindergarten lesson.

EXTENSIONS:
-Make a healthy tooth book or bulletin board by using tooth shaped pieces of paper. On each page draw and/or write something that will keep teeth healthy.
-Have a dentist or dental hygienist visit the class to discuss dental hygiene

Possible connections to Early American History:
-Have a collection of Colonial health care items (soaps, shaving brush and soap, comb, etc.) Colonial people realized that they needed these things, but their standards of cleanliness were different from ours. For instance many wealthy people shaved their heads and wore wigs. Colonial people had some diseases and problems that we now have learned how to avoid.
-Tooth decay was a big problem in colonial times. Teeth were pulled without anesthetic, and wooden dentures were ill fitting and painful.
-Try making soap as colonists did, using animal fat and lye perfumed with herbs.

GRADE LEVEL: third

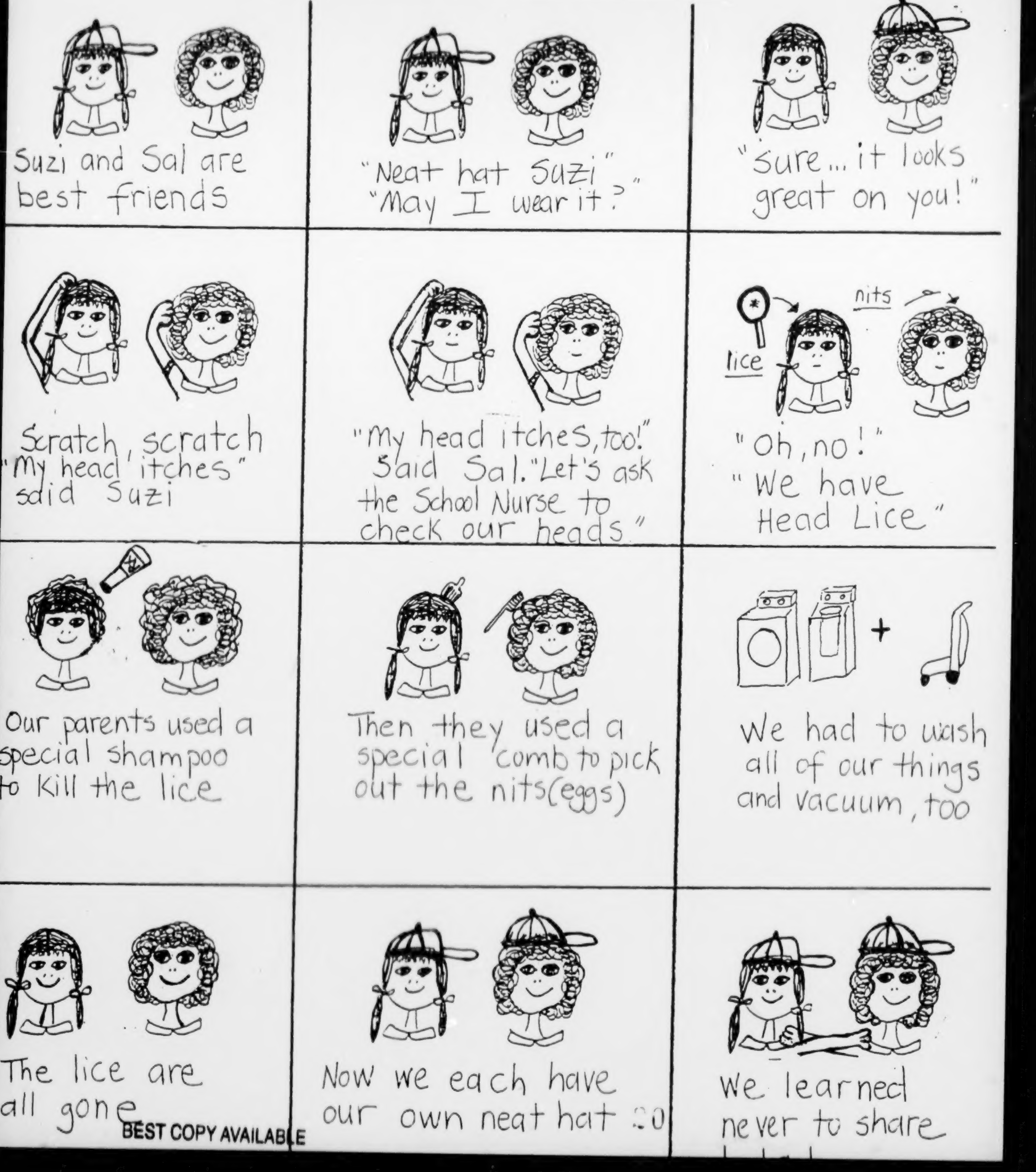
OBJECTIVES:
To learn the importance of keeping nails short and clean
To learn about the life cycle of lice

MATERIALS:
cartoons of lice life cycle
Pictures of different health care products, or actual products (shampoo, toothpaste, comb, brush, nail clippers, etc.)
100 x microscopes or videomicroscope
slides
different life stages of lice (nit, empty egg case, young louse, adult louse)

PROCEDURE:

Begin by asking "Why do we use all these different things?" Accept all reasonable responses. These are all items we use to keep our bodies clean and healthy. By keeping clean we can make sure that fewer germs get into our bodies to make us sick, we can also make sure that we feel good about ourselves, that we smell good, and that other people enjoy being around us. There are many different choices

Suzi and Sal


Suzi and Sal are best friends
"Neat hat Suzi" "May I wear it?"
"Sure... it looks great on you!"
Scratch, scratch "My head itches" said Suzi
"My head itches, too!" Said Sal. "Let's ask the School Nurse to check our heads"
nits
lice
"Oh, no!" "We have Head Lice"
Our parents used a special shampoo to kill the lice
Then they used a special comb to pick out the nits (eggs)
+
We had to wash all of our things and vacuum, too
The lice are all gone
Now we each have our own neat hat
We learned never to share

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that we can make when we go to buy these things, and no reason to spend lots of money on fancy soaps or shampoos when simpler ones will do, but we do need to use all of these things to keep us clean and healthy.

One thing we should use frequently are these nail clippers and scissors. Fingernails and toenails are hard tissues that protect the ends of the fingers and toes. The white part of a nail is made of dead cells which can be trimmed without feeling any pain. Nails should be kept short because dirt and germs can be caught under long nails. Use a brush to scrub out dirt from under nails. Try scraping from under the nails now, using the file from the nail clipper and place the scrapings onto a slide. This will be examined under a microscope. Have the children share what they see under the microscope or on the videomicroscope. The children may see things such as oil, dead skin cells, dirt, food, etc.

Discuss with the children why they should not bite their nails. Germs under the nails could get into the mouth and cause illness or disease. Children who bite nails could break the skin around the nails and make them sore.

To introduce the topic of head lice explain that a demonstration will be conducted to see how lice can travel from person to person. Place red felt dots on doll's head. Explain that lice are barely visible with the eyes, but that the red felt dots represent head lice. If the doll who has lice lies on the rug or pillow some may come off onto the fabric surface (demonstrate), then transfer on to a different doll (demonstrate with a second doll who lies in the same spot as the first). Any red felt dots that travel to the other doll's head are like female head lice that can lay hundreds of eggs that will grow into adults that can lay hundreds more eggs etc.

Ask the children "Why is it a problem to have lice?" Accept all reasonable responses making sure that they mention that lice suck blood and may spread disease, and make their victims very itchy and uncomfortable.

Use the microscopes or videomicroscope to examine all the life stages of lice: nit, empty egg case, young louse, adult louse.

EXTENSIONS:

-Try to gather material from under the nails after cleaning with soap and water, and then again after cleaning with a nail brush.

-Show pictures from magazines of people with and without good grooming. Have students identify whether each person is well groomed or not, and if not what steps they could take to improve their grooming.

-Examine advertisements from magazines for different health care products. Does the ad make children want to buy the product? How would using that product help them to stay healthy?

-Have the children create their own advertisements for different health care products.

-Have children discuss ways to prevent head lice transmission. Record the list and keep posted in classroom as a reminder to students.

-Have children create their own cartoon about head lice transmission and treatment.

GERMS AND DISEASES

Children get an average of two colds per year. Disease transmission can be reduced through proper hygiene and an understanding of disease mechanisms. Children will learn about different types of diseases, and develop an understanding for communicable and non-communicable diseases, bacteria and viruses, medicines and vaccines.

GRADE LEVELS: prekindergarten and kindergarten

OBJECTIVES:
To define germs: some are harmless, some make a person sick
To discuss ways that germs can get into the body
To identify and practice ways to avoid others germs
To identify and practice ways to reduce risk of transmitting germs

MATERIALS:
glitter in open bucket or wide container
rubber examination gloves
a band aid strip

PROCEDURE:

Explain that there are tiny, tiny germs on everything in the world. They are too tiny to see except with a powerful microscope. Most of the germs in the world are harmless, they cannot hurt a person. But some can make a person sick with a cold, or chicken pox, or strep.

Ask the children "How can germs be spread?" Brainstorm answers with them, being sure to cover the following points: coughing or sneezing without covering mouth spreads germs through air, touching something that somebody with germs has touched, using a glass or eating utensil that somebody else has used, putting anything in the mouth that anyone else has had in their mouths.

Next, ask "How can we stop germs from spreading?" Accept all reasonable answers and explain that the skin is the main way we keep germs out. To help the children see how germs might be passed from person to person start with one child who dips hand into glitter container. Hold up the child's hand and say "We can't really see germs because they are so small, but we can pretend that these are germs on X's hand. Now X will shake hands with Y, and what is happening? (Some of the germs are transmitted to Y) and Y shakes hands with Z and what happens? (Z now has some germs on their hand). Continue around class, or do in several small groups. When everyone has some germs on their hands tell children that now the germs can find their way into the childrens' bodies-see if they can tell how (on food and other objects that they touch with germ covered hands and then put into mouths, on open cuts on hands, through eyes if they rub them, etc.) Now ask the children how they will get rid of the germs. When someone suggests by washing, have them wash and dry hands. The teacher can model correct hand washing procedures, making sure all surfaces are cleaned and then dried carefully. Remind children that in order to get rid of germs they need to wash their hands thoroughly, with soap or with a premoistened towelette; merely rinsing under water faucet will not clean off the germs.

Have children list times when they should wash hands such as after using the bathroom, after touching an animal, before and after eating, after playing outside, etc.

Also discuss how germs can enter bodies through the mouth, if food is eaten with hands that aren't clean, or if things that have been in other peoples' mouths are put into the mouth, or if water that is not clean is consumed , or pencils that have germs from someone else's hands are chewed upon. Remind children to not share cups with another person or put their mouths on the water spigot when using a drinking fountain.

Germs can also enter the body through the eyes. When eyes are rubbed with dirty hands germs may be rubbed into the eyes. It's a good idea never to rub eyes. If it is absolutely necessary one must make sure the hands are clean.

Remind children never to bite another person, and never to touch another's blood. Also remind children to eat healthy foods and get enough sleep.

EXTENSIONS:
-Practice correct hand washing at home and at school

GRADE LEVEL: first

OBJECTIVES:
To define germs: some are harmless, some make a person sick
To discuss ways that germs can get into the body
To identify and practice ways to avoid others germs
To identify and practice ways to reduce risk of transmitting germs

MATERIALS:
lipstick
cotton swabs
plastic/paper cups

PROCEDURE:

Explain that there are tiny, tiny germs on everything in the world. They are too tiny to see except with a powerful microscope. Most of the germs in the world are harmless, they cannot hurt people. But some can make people sick with a cold, or chicken pox, or strep.

How can germs be spread? Brainstorm a list with the children, making sure that the following points are mentioned: coughing or sneezing without covering mouth spreads germs through air, touching something that somebody with germs has touched, using a glass or eating utensil that somebody else has used, putting anything in the mouth that anyone else has had in their mouths.

Demonstrate by putting on a glove and explaining that this is like the skin. The glitter in the bucket is like germs, except that real germs are so small we cannot see them with our eyes, we need a powerful microscope to see them. If a hand is put in the bucket germs can get onto the skin, but none can get through the skin into the body (peel off the glove to show a clean hand). Then puncture the glove with a pen or other sharp instrument and explain that this is like getting a cut in the skin. Now put the glove covered hand into the bucket of glitter (germs) and then remove the glove. The glitter will have traveled through the hole of glove just as germs can travel through a cut in the skin into the body. Now show what it is like with a bounded over the hole. Again, put on glove, but this time cover the hole with a bandaid and put into the bucket. This time when the glove is removed no glitter will be on hand. This is why it is good to keep skin clean, and if we do get a cut to clean it out and cover it with a dressing.

Also discuss how germs can enter bodies through the mouth, if food is eaten with hands that aren't clean, or if things that have been in other peoples' mouths are put into the mouth, or if water that is not clean is consumed , or pencils that have germs from someone else's hands are chewed upon. Remind children to not share cups with another person or put their mouths on the water spigot when using a drinking fountain.

Germs can also enter the body through the eyes. When eyes are rubbed with dirty hands germs may be rubbed into the eyes. It's a good idea never to rub eyes. If it is necessary one must make sure the hands are clean.

Remind children never to bite another person, and never to touch another's blood. Also remind children to eat healthy foods and get enough sleep.

Let's see how germs might be passed from person to person. Explain that the lipstick represents germs in one person's mouth. Model by putting on lipstick explaining that these are the germs which are really too tiny to see except with a microscope, but we are pretending that we can see them. Drink out of a cup, making a lipstick mark on cup. Explain that these are the germs on the cup.

Now ask the children "Is it acceptable to drink out of other side of cup? or if I had used a straw to drink the liquid?" Discuss all answers being sure to point out that the lipstick sticks to the cup just as germs do. If a cup is shared with another person germs are shared. The germs also get into the liquid in the cup so drinking from another spot will not be safe either, germs can still be spread. It is impossible to tell by looking at a liquid if there are germs in it. In case of doubt don't drink it!

Briefly discuss first aid for wounds. Stop bleeding by applying pressure. Clean with soap and water. Pat dry and apply a dressing.

Germs can be spread in blood. Children should be reminded to always wash their hands with soap and water and wash anything else that has blood on it. If clothes have blood on them, they should be changed. The nurse wears gloves when washing wounds so that blood does not get into her.

EXTENSIONS:

-Discuss vaccines. Explain that vaccines are given before a person might get a certain illness to prevent the person from getting it. Vaccines do not cure diseases, but they prevent them. Some vaccines are given by shot, others by mouth. Have children list vaccines they have received.

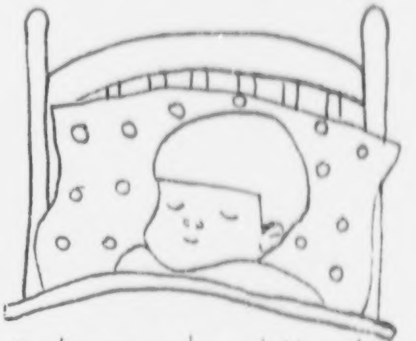
Healthy Habits

Brush your teeth at least twice a day

Eat three healthy meals every day

Take walks

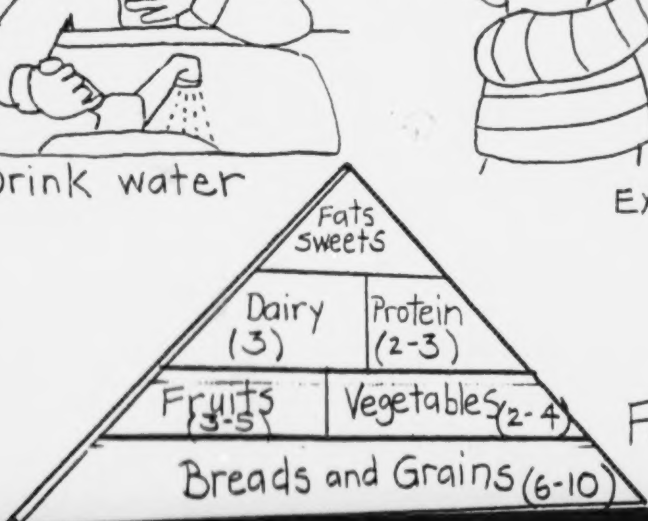
Read a book


Get a good night's sleep (about 9-10 hours)

Eat 5 fruits and vegetables each day

Drink water

Exercise daily


Fats
Sweets
Dairy (3)
Protein (2-3)
Fruits (3-5)
Vegetables (2-4)
Breads and Grains (6-10)

Follow the Food Pyramid

BEST COPY AVAILABLE

GRADE LEVEL: second

OBJECTIVES:
To define germs: some are harmless, some make a person sick
To discuss ways that germs can get into the body
To identify and practice ways to avoid others germs
To identify and practice ways to reduce risk of transmitting germs

MATERIALS:
spray bottle with colored liquid
box of tissues
pieces of paper towel

PROCEDURE:

Begin by reviewing same information as in prekindergarten and kindergarten.

Ask the children "How can germs be spread?" Coughing or sneezing without covering mouth spreads germs through air. One way cold germs are transmitted is through sneezing. Every time a person sneezes thousands of droplets are spread through the air. Have children stand back. Demonstrate with spray pump bottle, with water dyed with food coloring. The droplets in the mist contain pretend germs. If someone inhales or breathes in the germs they can get the illness that the germs cause and become ill. Hold a paper towel at arm's length and spray the bottle. Have children observe how much of spray hits paper towel and how much misses. Now hold the paper towel very close to the spray and have children observe again, explaining that this is like what happens if I sneeze, but cover my nose with a tissue. Demonstrate that spray is caught in paper towel. Now that all these germs are caught in the tissue what should be done with the tissue? It should be thrown away and hands washed! If a tissue not available when coughing/sneezing children should be taught to do it into the crook of their elbow so germs don't get onto the hands.

Have children list times when they should wash hands: after using the bathroom, after touching an animal, before and after eating, after playing outside, etc.

Also discuss how germs can enter bodies through the mouth, if food is eaten with hands that aren't clean, or if things that have been in other peoples' mouths are put into the mouth, or if water that is not clean is consumed , or pencils that have germs from someone else's hands are chewed upon, eating food that a fly has crawled over or being bitten by an animal with germs. Remind children to not share cups with another person or put their mouths on the water spigot when using a drinking fountain.

Germs can also enter the body through the eyes. When eyes are rubbed with dirty hands germs may be rubbed into the eyes. It's a good idea never to rub eyes. If it is necessary one must make sure the hands are clean.

Discuss other ways to keep cold germs from spreading? Children should be sure that their body has plenty of rest and liquids to drink. A healthy strong body is able to fight off germs better. Eat healthy foods, exercise, drink plenty of liquids and get plenty of sleep. A tired body fed junk food cannot fight off germs as well. Children should stay home if they are not feeling well enough to work hard at school. Get plenty of rest and sleep, and drink lots of liquids to get better. They will get better faster, and they will not get other people sick.

All areas should be kept clean, such as toys, desk tops, etc. Germs can live on some surfaces, especially if they have sticky popsicle juice or other foods to live on.

EXTENSIONS:

-Create a bulletin board "Cover Your Sneeze, Please". Students use paper plates to draw faces. Decorate with yarn hair, hats, glasses etc. Draw a hand on construction paper and cut out. Staple tissue onto plate face with hand stapled over. Additional health rules (sentences, poems or riddles) can be added to display.

GRADE LEVEL: third

OBJECTIVES:

To define germs: some are harmless, some make a person sick
To discuss ways that germs can get into the body
To identify and practice ways to avoid others germs
To identify and practice ways to reduce risk of transmitting germs
To learn that some diseases are communicable and others are not

MATERIALS:

ziplock baggies or petri dishes for germs to grow in
various media for bacteria to grow on (jello, potato, applesauce, tomato soup)
microscopes or videomicroscope if available

PROCEDURE:

Begin by introducing the words germs and diseases. What does the word "disease" mean? From two words "dis" meaning not, like disrespectful, dishonest, displeasure and "Ease" meaning comfort. So when your body has a disease it is *not comfortable*. Some diseases are caused by germs. What are germs? (Have children list their ideas about germs).

Germs are very tiny livings. They are so small a person needs a microscope to see them. They are found everywhere. Some germs cause diseases. Different germs cause different diseases. A virus is the smallest kind of germ. Viruses cause colds, chicken pox, flu, AIDS, etc. A virus cannot be killed by taking a medicine, although medicines may help a person deal with the symptoms, like antihistamines to unstuff the nose with a cold, or cough syrup to suppress a cough.

Bacteria are one celled germs. Bacteria can be killed by taking certain kinds of medicines called antibiotics (literally "against life"). If a student has taken an antibiotic for an ear infection or strep throat they have killed bacteria.

Discuss blood borne pathogens: Some germs are carried in the blood. Some of these are very dangerous and can make a person very sick such as AIDS and

Hepatitis B.) It is very important to wash wounds with soap and water, cover with a dressing, and never to touch other people's blood. If an accident occurs wash as soon as possible with soap and water. All children should be immunized or vaccinated for Hepatitis B. Everyone should use rubber gloves to clean an accident involving blood or other body fluids such as saliva, urine or feces.

Explain that to see what kind of bacteria are living in different parts of student's bodies they will be "culturing" the bacteria-giving them good food to grow on and a warm environment to live in, the ideal conditions for growth. This is what the doctor is doing if they take a swab from the throat to determine if a person has strep throat. The doctor may not be able to see the bacteria, but if they culture it and grow a large colony of the bacteria on a petri dish it makes the diagnosis of disease easier for them.

Divide students into groups. Take bacterial samples from each student: swabs of different parts of the body such as saliva, between toes, fingers, fingernail clippings etc. (Remind students to chose a part of the body that is acceptable to show in public). Place the sample onto the growing medium, and quickly close it up. Label and observe for several days. Caution children against opening the containers because breathing in the bacteria would make them sick. Have the children draw day by day as the bacterial samples grow and change over time.

Also explain that not all diseases are caused by germs. Cancer and heart disease cannot spread to others. Cancer is a disease in which harmful cells in the body grow in number and attack healthy cells. The harmful cancer cells can destroy parts of the body. Heart disease may be caused by eating too much fat, not getting enough exercise, and/or smoking. There are other diseases not caused by germs called "non-communicable" diseases. Have children discuss diseases they may be familiar with, and classify as to whether they are communicable or non-communicable.

EXTENSIONS:

-Discuss how the body makes antibodies to protect itself against certain types of germs.

-Discuss vaccines and how they work.

-Research the lives of scientists who have helped us understand different diseases and/or created vaccines (Louis Pasteur, Jonas Salk etc.)

-Invite a parent or friend of someone in the class who is a doctor or health care provider to come to class to discuss disease prevention and treatment.

SAFETY

The leading health risk facing children today is not disease or drugs. It is accidents, with traffic accidents leading the list of risks, followed by drownings, burns and scalds, choking and poisoning, and falls. Many of these accidents are preventable by learning basic safety habits such as wearing seat belts and bike helmets, and learning to cross streets safely. All children should know how to summon the rescue squad should an accident occur. Children will learn ways to prevent accidents from happening, and will learn ways to respond to accidents if they do occur.

GRADE LEVELS: prekindergarten and kindergarten

OBJECTIVES:
To learn how to ride safely in a car.
To learn how to summon the rescue squad.
To learn not to take anything or go anywhere with strangers.

MATERIALS:
Graph with pictures of child sitting in car with seat belt, child in booster seat in car, child in mother's arms, child sitting in car with no seat belt
small post-it notes
wagon or other wheeled vehicle, and doll, or soft boiled egg
masking tape
play or real telephone

PROCEDURE:

Begin the class by telling the children that many children are hurt every year in accidents that did not need to have happened. We can prevent accidents by learning safety precautions.

1. Car safety

Begin by announcing that the class is going to create a graph, or picture to answer a question. The question is, how do the students usually travel in a car?

Each child will have a post-it note and write their name on it, and should place it in the appropriate column. Explain the pictures and call on several children at a time to come up and place their post-it in the column that best shows how they usually travel in a car. Summarize results when done (for instance, this graph shows us that 8 children use car seats, 6 use seat belts, 2 ride in their mother's arms, etc.)

Then, tell the children that seat belts can save lives. Why do they think they work? Demonstrate by using a child's wagon with a doll in it, or small car or other wheeled vehicle with either a doll or block or soft boiled egg on it. Have another block as barrier. Ask the children "If I push the car fast and let go what will happen to this doll when the car hits the block?" Accept all predictions, and then conduct the experiment. Get the children to notice that although the car stops moving the doll keeps on moving until it crashes. There are two crashes, the car and then the person.

Now use masking tape to fasten the doll into the wagon, and ask the children to make a prediction about what will happen. Have them notice that the doll stays put now, just like when a person is wearing a seat belt. When the car stops the person stops.

Ask children what they think causes car accidents. Make a list of their responses. Make children aware that accidents are often the result of sudden stops, swerves or crashes. People in the car may come into violent impact with the inside of the car, or be thrown from the car into a tree, telephone pole or another car. Nobody can predict when an accident will occur, but wearing seat belts will help save lives.

Encourage the children to remind the adults they drive with to buckle up before turning the key, and to check to make certain that all passengers are buckled properly. Recent reports on air bags indicate that while they save lives of adults seated in the front of a car involved in an accident, they may be dangerous for small children. The safest place for a child to sit is always in the back seat (ABC=Always Buckle Children in the back). Instruct children to never sit in the front passenger seat of a car if there is an air bag on that side of the car. Ask children to check with their parents to determine if their car has an air bag.

2. 911

If a child has an accident or emergency in their home do they know what to do? First of all, they should stay calm. There is a rescue squad at 911. Pick up the telephone, wait for the dial tone, and press 9-1-1. Be ready to tell the person who answers where you are, what happened, and the telephone number. Children have saved lives by knowing how to do this. Children should know that any pay phone can be used for free to dial 911 for emergencies.

Have the children practice responding to emergencies with the telephone. Remind children that these kinds of emergencies are very unlikely to happen, but that it is better to be prepared to deal with an emergency by practicing. Whisper an emergency into their ear, the child dials 911 and describes the situation. Have other children comment on the accuracy of the information.

Sample emergencies:

-Daddy fell off the ladder while he was cleaning the gutters and now he can't move

-Mommy fell down the stairs to the basement and she won't talk to me

-My grandma is asleep in the chair and I can't wake her up

-I see smoke coming from my neighbors house and I know that nobody is there

-My babysitter is choking on a piece of candy

3. Strangers

It is important to tell children that most adults are friendly and are good to children. However, some are not good adults and you cannot tell just by looking at them. An adult that you do not know is a stranger. What are some rules to follow about strangers?

Accept all reasonable responses making sure students know that children should:

-never accept ride in car from someone they don't know

-never take toys, money, candy or other gift from anyone unless parents know about it
-always tell parents when someone offers to give them something
-always say "no" if touched by someone in ways they don't like. If it happens tell parents or teacher right away.
-do not talk to people they do not know
-stay with parents in store. If do get lost find a clerk (wearing badge) and ask for help-never leave the store. The loudspeaker can be used to call parents.
-do not keep secrets from parents
-know how to use telephone to call home or for help

EXTENSIONS:
-Role play emergencies and dial 911 for different situations-have children decide who they would ask for (police, ambulance, fire department) for that particular emergency

GRADE LEVEL: first

OBJECTIVES:
To learn how to cross street safely
To learn how to keep safe from strangers

MATERIALS:
Masking tape
Red, yellow and green circles from construction paper or plates to make a stoplight
Stickers or other rewards

PROCEDURE:
1. Pedestrian Safety

Ask the children how many are allowed to cross streets alone. What are some rules you need to follow? (List all reasonable answers)

Discuss with children that a child should practice crossing streets with their parents many, many times before they cross a street alone. They should always cross at a crosswalk, never in the middle of a block. A crosswalk is marked by lines painted on the street. They should cross at a stoplight only when the light is green, and walk sign says walk, never if the don't walk sign is flashing. Look to the left, then look to the right, and to the left again. When there is no one coming step into the crosswalk. Cross the street quickly, continuing to keep looking for cars.

Use masking tape to mark a cross walk on the floor of the classroom. Use cut out circles of paper or plastic plates colored red, yellow and green to make a stoplight. Have the children come up in small groups to line up to practice crossing the street safely. The teacher (or a student) should point to a color on the stoplight. The child has to decide if it is safe to cross or not, and if so look left, right and left before crossing. If stoplight is red or yellow children should not cross. Give the child a sticker or other reward for successful completion.

Show the children a stop sign. Tell students that cars should stop at stop sign. Children should make eye contact with drivers in a car to make sure that they can see them before they cross a street. Children can practice being the driver (in a wagon) and pedestrian. Remind children never to dart out into the street to chase a ball.

2. Strangers

Most adults are friendly and are good to children. However, some are not good adults and you cannot tell just by looking at them. An adult that a child does not know is a stranger. What are some rules to follow about strangers?

Children should:

-never accept ride in car from someone they don't know

-never take toys, money, candy or other gift from anyone unless parents know about it

-always tell parents when someone offers to give them something

-always say "no" if touched by someone in ways they don't like. If it happens tell parents or teacher right away.

-do not talk to people they do not know

-stay with parents in store. If a child does get lost find a clerk (a person wearing a badge) and ask them for help-never leave the store. The loudspeaker can be used to call parents.

-do not keep secrets from parents

-know how to use telephone to call home or for help

EXTENSIONS:

-Set up a safety town on the playground with stoplights and stop signs. Children can teach other children in other grades how to cross the street safely.

-If children are approached by a stranger they should try to remember as much as possible about that person. You can practice this by showing pictures from a magazine to class briefly and having them draw, write about or verbally describe as much as they remember about that person-eye color, hair color, what they were wearing, anything unusual.

GRADE LEVEL: second

OBJECTIVES:

To learn how to protect skin from the sun

To learn how to keep body properly hydrated while playing in the sun

MATERIALS:

bin with sun block, hat, sunglasses

raisins

grapes

doll
flashlight
different squares of fabrics to test

PROCEDURE:

1. Sun Safety

The instructor should know that more than 90% of all skin cancer is caused by the sun, and most of a person's exposure to the sun occurs before they are 20.

Show the children a raisin and a grape. Ask them what is the difference between these two things? Accept all answers, and then tell them the only difference is what the sun did to the grape! The sun can dry out the moisture from the grape (this is called dehydration) and turn it into a wrinkled raisin in a few months. The sun can also do this to our skin and our body, and can even cause skin cancer if we are not careful. How can we be careful? Accept all reasonable answers making sure that the following information is covered:

-The hours from 11 to 2 are worst to be out in the sun. It is better to play inside or in the shade.

-If a student must be outside in the middle of the day, put on sun block. SPF#15 (SPF means Sun Protection Factor) or higher is recommended. Wear hats, and wear clothing that won't let the sun through. (Hold fabric squares up to light. If light passes through the fabric, then the sun can pass through too.)

-An easy rule to use is to test the length of our shadow. If the shadow is shorter than a person is tall then the sun can burn skin, and it is necessary to cover up with sun block, or clothing, or play inside or in the shade. (The teacher or child could demonstrate this using a small doll and flashlight to create shadow. When is the shadow usually shorter than we are tall? In the middle of the day).

Discuss ways to be safe in the sun if a person is at the beach or on a playing field. Discuss the types of sun block available, and what the SPF rating means. The higher the number the more protection from the burning rays of the sun. A child should wear an SPF rating of 15 or higher and reapply frequently.

2. Proper Hydration

It is important to keep the proper amount of water in the body, and not let it "dry" out as the grape did when it became a raisin. How can people avoid "drying" out? Accept all reasonable answers including:

-Drink plenty of fluids, especially water, as often as every 15 minutes when it is hot and humid. Thirst is an indicator of the water level in the body, when the water level is low a person feels thirsty and they need to fill your body back up with water.

-Keep cool. Stay in the shade or indoors.

-Use water to cool the body both inside and out. Inside, by drinking water and outside by swimming, running through the sprinkler or taking a cool shower.

EXTENSIONS:
-Discuss simple rules of first aid to treat playground injuries
-Discuss RICE (rest, ice, compression, elevation) to treat sports injuries and accidents
-Discuss heat related illnesses such as heat stroke, heat exhaustion and cramps.

GRADE LEVEL: third

OBJECTIVES:
To learn how to be safe from lightning
To learn that playing with matches is dangerous
To learn why not to play with guns or fireworks

MATERIALS:
book and/or box of matches
cup of water
lightning poster

PROCEDURE:
1. Lightning

The teacher should know that every year lightning kills about 100 people, and injures more than 300 others, more than any other weather hazard including blizzards, hurricanes, floods, tornadoes, earthquakes and volcanic eruptions. Lightning is caused by an electrical charge building up in a cloud. The cloud develops a negative charge, the ground a positive charge. Lightning can travel at 300 miles per second and carry up to 50 million volts of electricity. Anything tall: a tree, a tower, a person, can become a path for the electricity.

The best defense against lightning injury is to plan ahead. Don't let yourself be caught by surprise. If you are going out hiking or boating and you think there is any chance of lightning danger plan where you could find safety.

Have children brainstorm ways to be safe if a thunder and lightning storm threatens:

Stop swimming or boating as soon as a storm is seen or heard since water conducts electricity.
Go inside a large building or home if possible
Go inside a car and roll up the windows
Stay away from the telephone except in an emergency
Do not use electronic equipment like computers, televisions, VCR's etc.
If outside and away from buildings don't be connected to the highest object
Stay away from trees and telephone poles
Stay off hilltops, try to crouch down in a ravine or valley (model this)
Stay away from any small metal vehicles like bicycles, golf carts, farm equipment
Avoid wire fences, clotheslines, metal pipes and rails and other conductors

2. Match safety

A match is a tool that has a specific purpose. Ask children to list instances where matches are necessary, and under what conditions.

Demonstrate the correct way to light a match:

1. open package and remove one match.
2. close package (to prevent flare up of all the other match heads)
3. turn package over to side with striking surface
4. hold match at bottom and strike away from body
5. hold match upright or horizontally for 2-3 seconds.
6. blow out the flame and wait 5-10 seconds until the match is cool to discard or dip in water.
7. make sure match lighting is done with proper adult supervision and under safe conditions.

3. Firework safety

A special holiday will take place while students are away from school this summer. It will be a lot of fun, but many people are injured every year setting off firecrackers. What are some rules students can think of to be safe over Fourth of July? Accept all reasonable answers making sure the following are mentioned:

1. Only adults should light fireworks
2. spectators should be a safe distance away from the fireworks as sparks shoot out quite a distance
3. Have water available to put out a fire or smoldering fireworks.
4. Firecrackers and cherry bombs are very dangerous and can cause serious injuries especially to hands.
5. Firecrackers are not toys.

4. Gun safety

When used safely and legally a gun can be an important way to protect yourself or to participate in the sport of hunting for food. When used unsafely or illegally guns can be deadly. Have children brainstorm ideas about gun safety. Accept all reasonable answers making sure the following are covered

1. Guns are not toys, they can kill.
2. It is difficult to tell if a gun is loaded or not, so do not ever pick up a gun.
3. Do not play with guns if you find one at a friend's house, or on the ground.
4. You must have a permit to own a gun legally.

EXTENSIONS:

-Viewing of pictures of injuries caused by fireworks

NUTRITION

"You are what you eat" as the **old** saying goes. What's **new** in nutrition education (relatively) is the Food Pyramid, introduced in 1992 by the U.S Department of Agriculture as a simple method To picture a balanced diet.

GRADE LEVELS: prekindergarten and kindergarten

OBJECTIVES:
To learn that a good diet is essential to good health
To learn about the food pyramid and the five food groups
To learn to make healthy choices for snacks

MATERIALS:
Large felt food pyramid and felt food items (available commercially from a variety of early education catalogs or make your own)
Food pyramid master
magnets (precut strips of magnet strip into 2 inch sections) or foot long pieces of string to make a hanging mobile

PROCEDURE:

Explain that the human body is the most remarkable machine in the world. Like manmade machines, such as a car, it is made up of many small and large parts that work together. Like a car our bodies need fuel, good care and regular check ups to work properly. Ask the children "Why do we need fuel?" Accept all reasonable answers, making sure the children mention to keep the heart pumping, to keep us breathing, to keep us growing and to be able to mend itself. Ask the students if they have ever seen a car fix a dent in its fender, or a flat tire, or be able to grow? That is why our body is such a wonderful machine, because it can fix itself, and grow, as well as work every day.

Ask students what kind of fuel they think our bodies need to run. Stress that like a car, if we don't get the right kinds of fuel we don't run properly. We need certain foods to stay healthy, without these foods we become sick, weak, or tired. The food pyramid reminds us what foods we need to eat everyday to stay healthy and strong.

The bottom of the pyramid is big, that means we need to eat a lot of this group of foods, the bread group, at least 6-11 servings per day. They give us energy. Have children guess some members of this group. What is their favorite?

The next level is fruits (2-4 per day) and vegetables (3-5 per day). They give us vitamins we need to stay healthy, have good skin,hair and eyes, and they give us energy. Again, have children name some fruits and vegetables, and list their favorites.

The dairy group should be 3 servings a day to provide calcium to keep our teeth and bones strong. Discuss group members and favorites.

The last food group is meat, fish, eggs and nuts. They give us protein to help grow and build strong muscles. We need two servings a day.

These five groups are foods we need to eat every single day. At the top of the pyramid are things we only need to eat a little bit. These are fats and sweets. They may taste good, but they are bad for us and called “junk food”. If we eat too much of them and get full and then don't have room for the good foods our bodies need. Remember, there are no bad foods, only bad diets!

Combination foods may have foods from several different groups in them, like pizza or tacos.

To help the children remember the pyramid requirements have them hold up both hands, fingers extended. Ten is a good number of servings from the bread group. Then hold up the fingers on one hand. At least five servings from the fruit and vegetable group is desirable. Hold up the fingers of the other hand. Five is a good number of servings from the protein and dairy groups. Then discuss what the children have eaten so far today, and how that fits into these different groups. For instance, if they had a whole sandwich at lunch the two slices of bread equal two servings from the bread group, the meat a serving from the protein group, a glass of milk a serving from the dairy group and an apple a serving from the fruit group. Crackers for a snack are another serving from the bread group.

Distribute felt food items to students. Have a child stand and tell the students what food he/she is holding, and to which group it belongs. The child places their felt food onto the proper food group on the large felt food pyramid.

Tell the children they are going to cut out a food pyramid to remind them about the foods they need to eat every day. Use the attached master to cut out and assemble into either a 3 dimensional refrigerator magnet, or mobile to display at home.

EXTENSION ACTIVITIES:

-Have tastings of different food group foods-either have parents send in, purchase, or get from school kitchen. Focus on one group per day, and have children create graphs of their favorites.

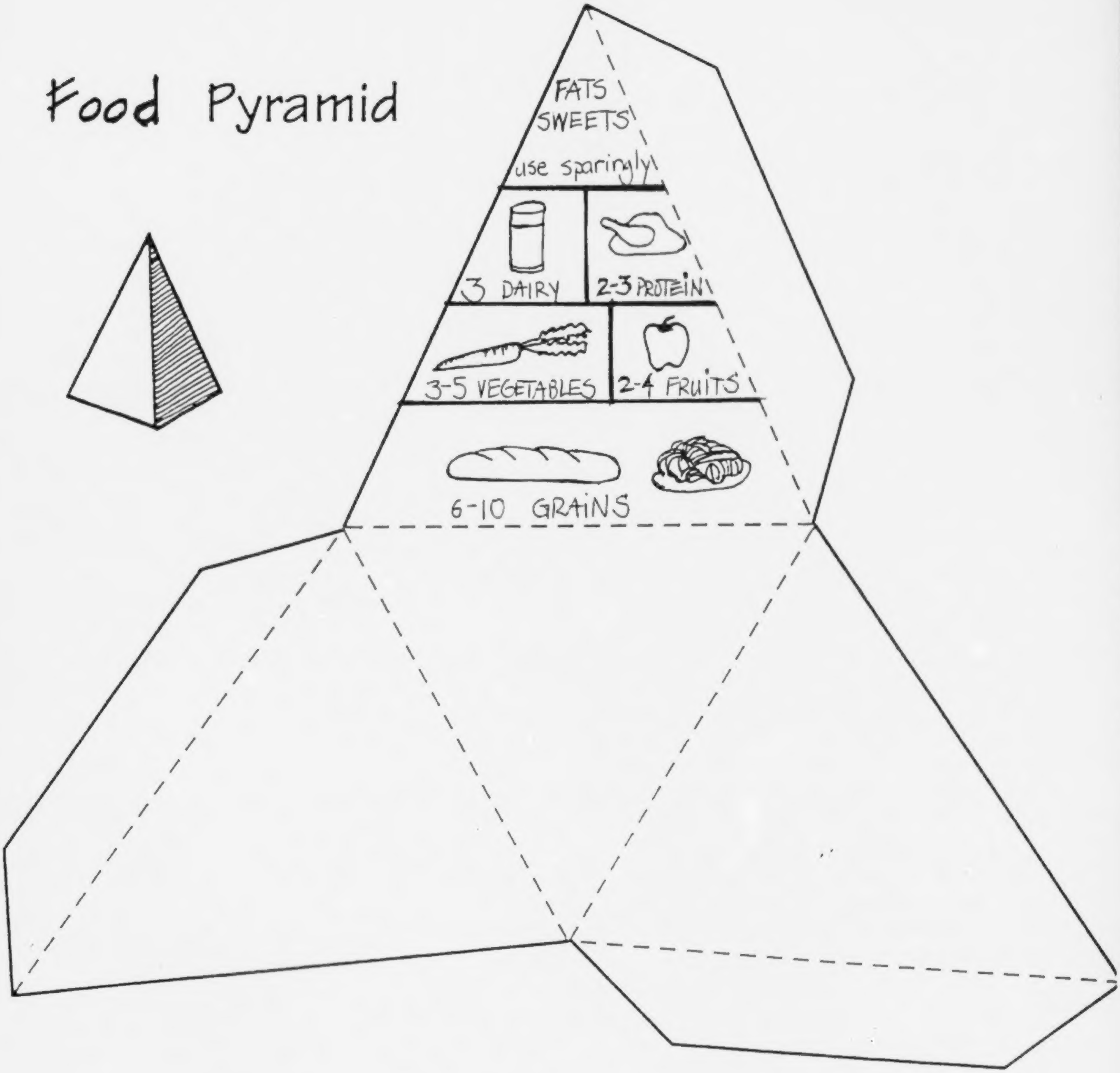
-Bring in old food magazines and coupon ads. Have children cut and paste pictures into the appropriate sections of large sized food pyramids.

-Have the children set up a store in the classroom. Use shopping bags with pictures of the different food groups on them, and empty boxes, cans, plastic models etc. Have the children decide which foods to place in which food group bag.

-Try some healthy snack recipes:

    -make popsicles with 100% fruit juice
    -make low fat dips for vegetables with yogurt instead of sour cream. Serve with a variety of raw vegetables
    -for a tasty frozen treat place grapes into the freezer and eat frozen
    -use your air popper to make fat free popcorn. Sprinkle with a little Parmesan cheese.
    -thin yogurt with fruit juice to make a dip for apple slices
    -make "ants on a log"-celery sticks spread with peanut butter (or low fat cream cheese) and dotted with raisins
    -use kebab sticks and chunks of fruits such as melon, grapes, apple slices, banana, pineapple to create fruit kebabs

Food Pyramid


FATS
SWEETS
use sparingly
3 DAIRY
2-3 PROTEIN
3-5 VEGETABLES
2-4 FRUITS
6-10 GRAINS

-Keep a food diary. Have children color in the each box on the pyramid as they eat that food. Did they eat a balanced diet?
-Have children plan a menu for a family for an entire day, including snacks using the right amount of foods from all the food groups.
-Focus on a particular food or food group, and explore ways that it is eaten around the world. The study of a food like bread provides a wonderful multicultural unit in nutrition as children see how the base of the food pyramid is created and consumed in different cultures.

GRADE LEVEL: first

OBJECTIVES:
To learn that a good diet is essential to good health
To learn about the food pyramid and the five food groups
To learn about the importance of the dairy group
To learn to make healthy choices for snacks

MATERIALS:
bones soaked in vinegar
cups labeled whole, 2%, 1%, skim
milk of each different type
calcium fortified orange juice for children with milk allergies
blindfolds
graph of different milk types
post-it notes for graph

PROCEDURE:

Begin as with the prekindergarten and kindergarten lesson, reviewing why we need to eat, and the different parts of the food pyramid.

Calcium is a mineral that is very important for the body to grow strong bones and teeth. To see what would happen to the bones and teeth if they had no calcium these bones have been soaked in vinegar to dissolve away the calcium. They are so soft that they can be tied in knots! If a person doesn't get enough calcium in their diet their bones may become very brittle, like glass, and break easily. Discuss with children different ways that they can get calcium: milk, yogurt, cheese, brocolli, calcium added orange juice.

Ask the children if they can name different kinds of milk. (White, chocolate, skim, lowfat, etc.) Milk with most of the fat left in it is called whole milk. Lowfat means that the amount of fat is lower than in whole milk. When all the fat is removed it is called skim milk or non-fat milk. Doctors tell us that too much fat in our diet can cause heart problems, and a good way to get enough calcium without too much fat is to drink skim or 1% milk. We are going to have a test to see the differences in the various kinds of milk, and what the class drinks the most. Pour a small amount of whole, 2%, 1% and skim milk into clear, labeled cups.

Swirl each liquid around and have the children notice differences in how the types of milk behave. (Whole milk is opaque, sticks more to the side of the cup, and is more viscous. Skim milk is more translucent, and thin.) Blindfold one child (or have them close their eyes) and give them different cups to determine if they can tell which is the whole, skim or 1% or 2%. Which one do they like best? Which one do they normally drink?

Create a graph of type of milk the children drink at home. Either poll the children and record numbers on chalkboard or have each child write their name on a post-it note and place into appropriate column on graph.

Discuss other foods that are rich in calcium that can help meet the daily requirement, especially if children are allergic to dairy products.

EXTENSION ACTIVITIES:
-Examine food labels to determine how much calcium is present in different foods (include milk, cereal, canned fruit, raisins, etc.)
-Make calcium rich snacks like homemade yogurt or cottage cheese
-Have children create a nutrition game
-Keep a food diary

GRADE LEVEL: second

OBJECTIVES:
To learn that a good diet is essential to good health
To learn about the food pyramid and the five food groups
To learn to make healthy choices for snacks
To learn about the importance of rest and sleep

MATERIALS:
food pyramid bingo handout
some kind of game markers (beans, paper dots, pennies, etc.)

PROCEDURE:

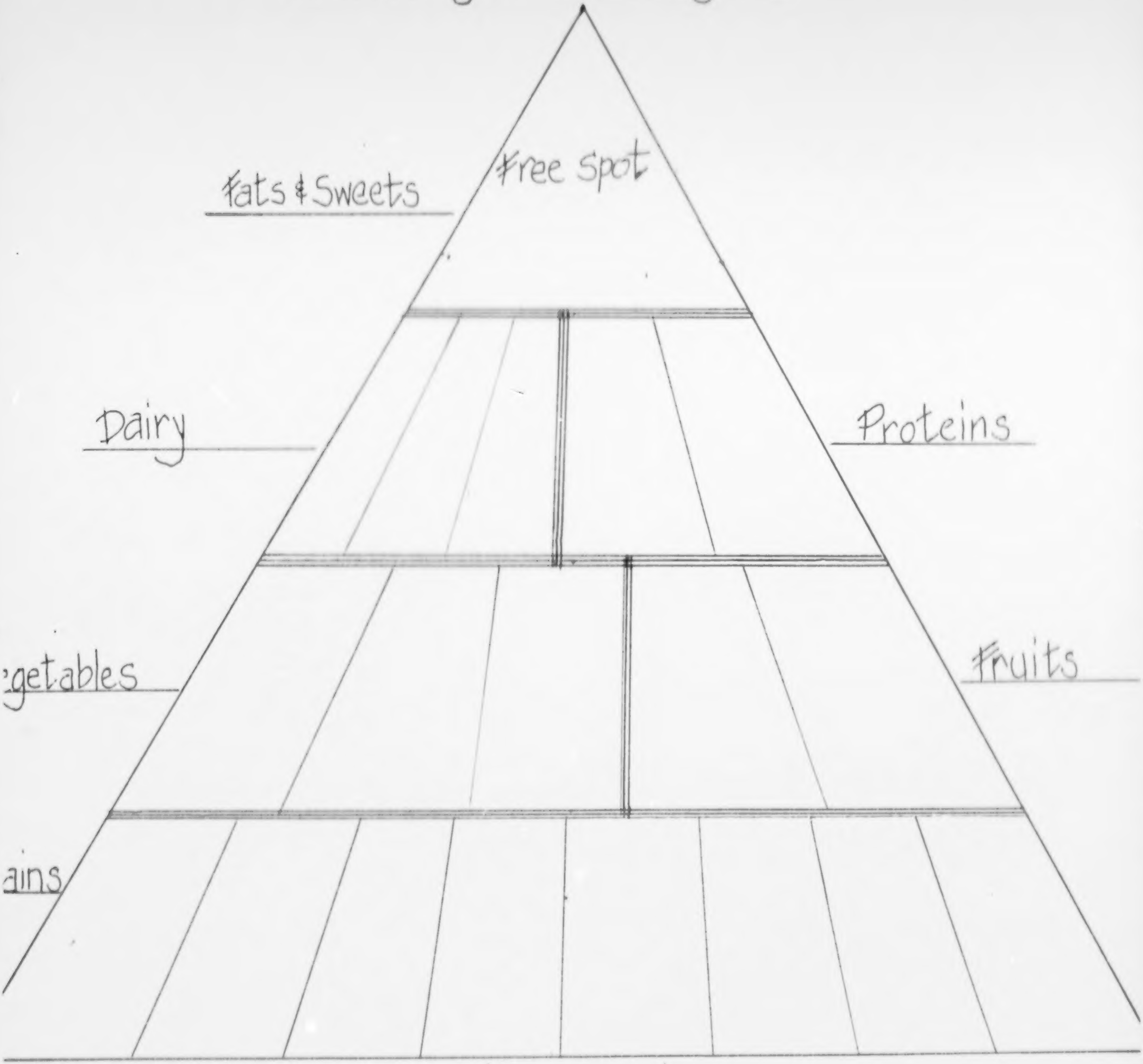
Begin as with the prekindergarten and kindergarten lesson, reviewing why we need to eat, and the different parts of the food pyramid.

Create food pyramid bingo game and play with class according to the rules on handout. Children can keep in class to play with each other or take home.

Rest and sleep: Ask children what activity takes up about one third of their lives. Accept all reasonable answers, and then explain that we to sleep 8 or more out of 24 hours. Why do we need to sleep? List answers, stressing that we need sleep to grow, to be able to work and to play well. Tired people can not concentrate well. If any child has an infant at home they can report on how much time they spend sleeping.

Ask the children when they feel tired or sleepy-after a period of activity, or if they

Food Pyramid Bingo


Free spot
Fats & Sweets
Dairy
Proteins
getables
Fruits
ains

ach child receives a Bingo card.
all on a student to name a food item. Children decide o which food group that item belongs and place a marker 1 a space. Continue to call on children until someone ORRECTLY fills in all of the spaces and says Bingo". Check against the "master" card.
he teacher will need to play along to create the naster" card.

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stayed up late beyond their usual bedtime? Our bodies need rest to recharge, and even though we usually sleep at nighttime, it is a good idea to rest or nap during the day if we feel tired. People who are sick need extra sleep to help their bodies fight infection.

Discuss with the children how to maintain good health. Brainstorm many ways to keep healthy, making sure all the activities on the healthy habits worksheet are mentioned. Distribute healthy habits worksheet,and have children circle the activities they do each day. If there are some they have not circled discuss why, and how they could change their behavior.

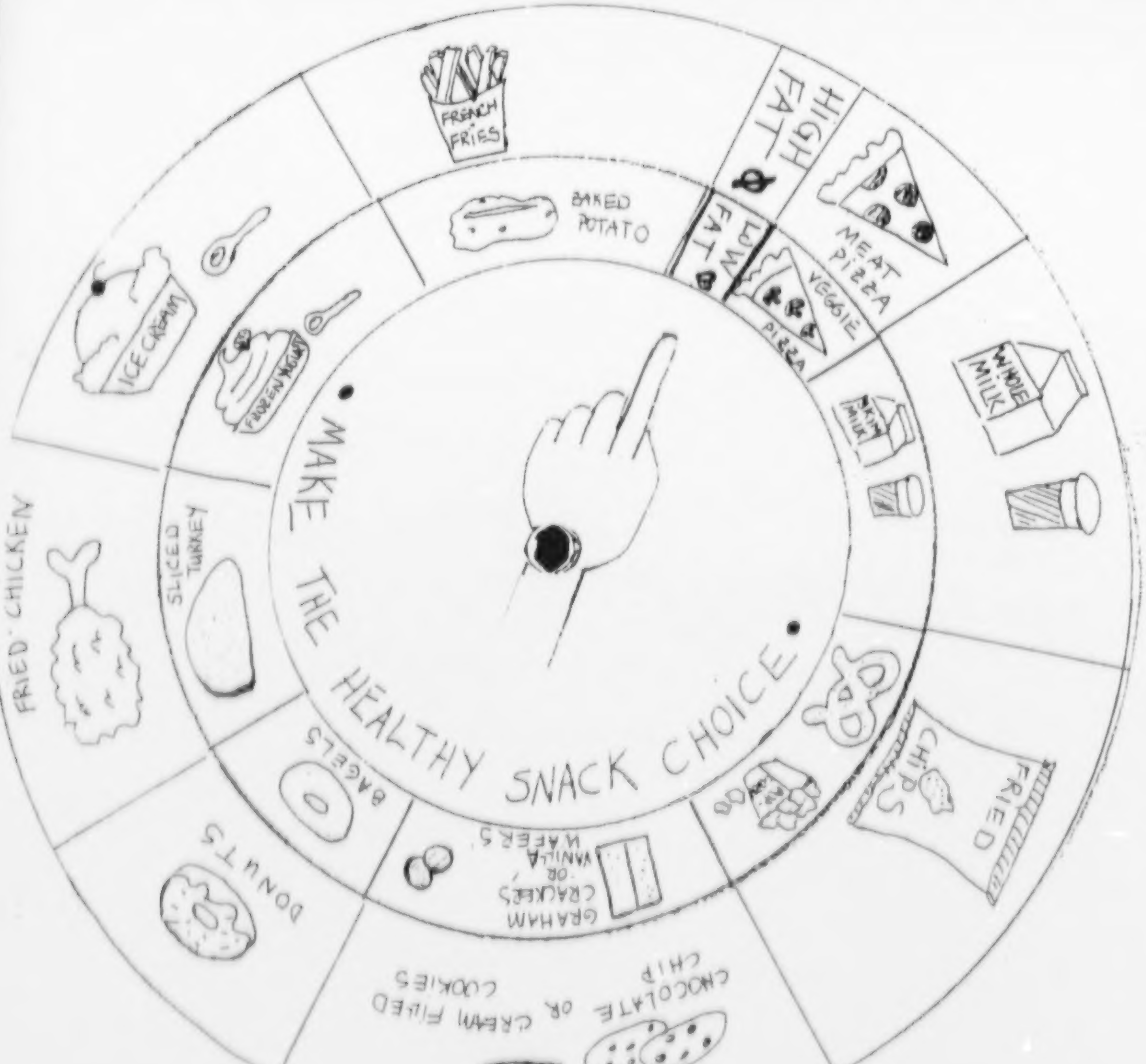
EXTENSION ACTIVITIES:
-Keep a food diary.
-Have children draw their bedroom and what they like best about bedtime. Discuss rituals like stories before bed, favorite stuffed animal. Discuss importance of good mattress, window open a crack, vent opened or fan on for ventilation, darkened, quiet room. Children may be surprised to learn that our bodies are moving even during sleep and that our eyes are moving rapidly during different stages of sleep.
-Have children keep a dream diary. Our minds are always active even when asleep, and sometimes we have dreams. Sometimes we remember them clearly, other times only parts or not at all. Sometimes our dreams help us deal with things we have experienced that day, or fears we may have.
-Create a class graph of bedtimes and waking up times. Use a clock face with moveable hands to determine how many hours of sleep they received. Children should be getting 10-11 hours per night.
-Have tastings of different food group foods-either have parents send in, purchase, or get from kitchen. Focus on one group per day, and have children graph their favorites.
-To understand how food was preserved in earlier times have children conduct apple drying experiments. They can measure the amount of water that evaporates each day, and at the end of the experiment have a tasty snack to eat. Before the development of preservatives drying food was an important method to provide foods from all the food groups year round.

GRADE LEVEL: third

To learn that a good diet is essential to good health
To learn about the food pyramid and the five food groups
To learn about avoiding fat
To learn to make healthy choices for snacks

MATERIALS:
brown paper towels or brown paper lunch bags
bits of variety of foods to test for fats:
(peanut butter, potato chip, salami, carrot, raisin, cheese, cereal, crackers etc.)

SNACK WHEEL


FRENCH FRIES
BAKED POTATO
HIGH FAT
LOW FAT
MEAT PIZZA
VEGGIE PIZZA
WHOLE MILK
SKIM MILK
FRIED CHIPS
GRAHAM CRACKERS OR VANILLA WAFERS
CHOCOLATE CHIP OR CREAM FILLED COOKIES
DONUTS
BAGELS
FRIED CHICKEN
SLICED TURKEY
ICE CREAM
FROZEN YOGURT
MAKE THE HEALTHY SNACK CHOICE

SNACK WHEEL:

- CUT OUT SHAPE "A"
- CUT OUT SHAPE "B"
- PLACE SHAPE "B" IN CENTER OF SHAPE "A"
- HOLD IN PLACE WITH A PAPER FASTENER
- SPIN THE WHEEL SO THE FINGER POINTS TO A GROUP OF FOODS

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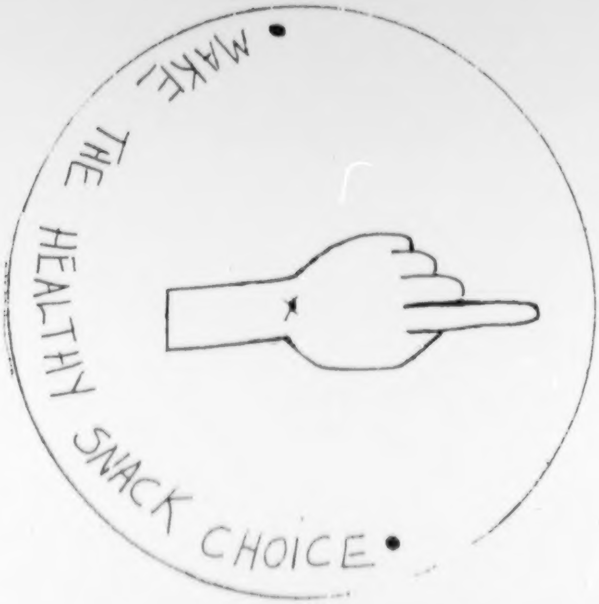
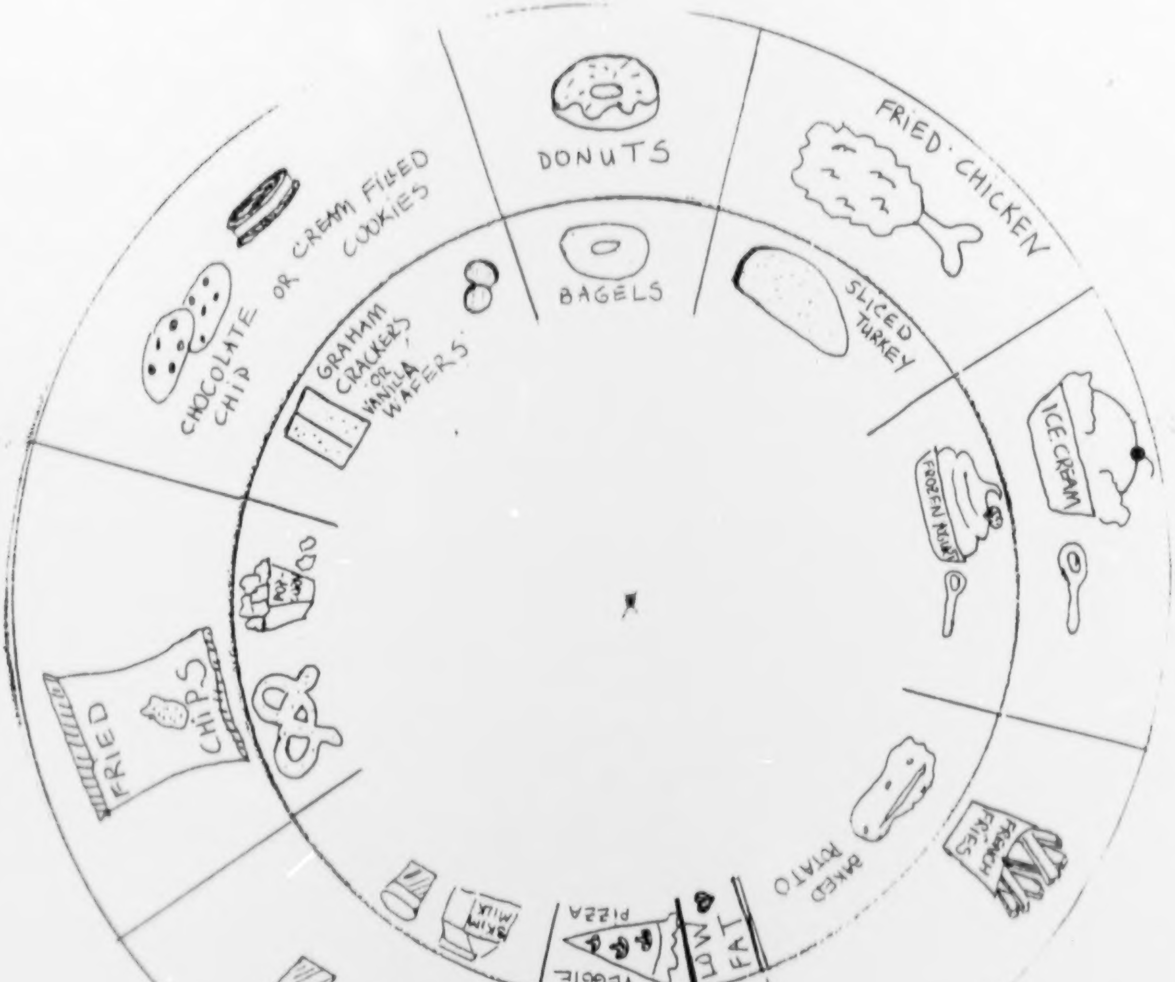

MAKE THE HEALTHY SNACK CHOICE

SHAPE "B"


DONUTS
BAGELS
FRIED CHICKEN
SLICED TURKEY
ICE CREAM
FROZEN YOGURT
FRENCH FRIES
BAKED POTATO
LOW FAT
HIGH FAT
VEGGIE PIZZA
MEAT PIZZA
SKIM MILK
WHOLE MILK
FRIED CHIPS
POP CORN
GRAHAM CRACKERS OR VANILLA WAFERS
CHOCOLATE CHIP OR CREAM FILLED COOKIES

SHAPE "A"

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PROCEDURE:

Begin as with the prekindergarten and kindergarten lesson, reviewing why we need to eat, and the different parts of the food pyramid.

Avoiding fats.

Ask the children "What is the problem with eating too much fat?" Our bodies need some fat to give us energy, padding, and to help us keep warm. But, most of us eat way too much fat. What is the problem with that? Discuss heart disease, clogged arteries.

How do you test for fats? If you rub a food on a brown paper towel like this it may leave a wet mark. If it evaporates after several minutes you know that it was only water (remind children that every food contains water). If the mark remains translucent or shiny looking that food contains fat. Predict, then test which foods contain fat. Summarize results, then discuss low fat options for snacks. Discuss alternatives to high fat foods and have the children create a reminder list For instance, instead of french fries how about a baked potato? Instead of ice cream how about low-fat yogurt? Children could draw the alternate pairs of foods, or list by name, or create the snack wheel attached.

EXTENSIONS:

-Test for fat the same food prepared different ways, such as potato raw, fried, and baked. Does preparation make a difference?

-Examine food labels to determine which foods are high in fat. How much of that food would you need to eat each day to eat the recommended amount?

-Have tastings of high fat snacks, and lower fat alternatives (frozen yogurt and ice cream; popcorn with and without butter, sourcream dip and dip made with yogurt). Which do they prefer? Why not eat the lower fat choice if its better for you!

-Have children carry backpacks with about 5 or 10 pounds of books around with them all day. Is it tiring to carry the extra weight? That's what being overweight does to your heart, it has to work harder to carry around all that extra weight. (Be sensitive to any children who already may be overweight, and be sure to point out that muscle weighs more than fat, so one child may weigh more than another but not be fat)

-To simulate what happens when our arteries become clogged. Try sucking juice through a straw, then bend straw over and suck again. Which is harder? The smaller the diameter of the straw the harder it is to suck. When the blood vessels become clogged with fat the heart has to work much harder also. The heart has to work harder if the body carries extra weight. Healthy eating and living helps to keep the heart healthy.

DRUGS

Drugs remain one of the leading educational concerns among the nation's schools. Educational authorities believe that education about drugs should begin as early as possible. Children need to have information to make responsible decisions regarding drug use before they are faced with making actual decisions.

GRADE LEVELS: prekindergarten and kindergarten

OBJECTIVES:
To know the difference between medicines and illegal drugs
To know from whom it is appropriate to take medicines

MATERIALS:
actual containers of or pictures of medicines of various kinds (tylenol, cough syrup, vitamins, Nix, calamine lotion, antibiotic etc.) and drugs of various kinds (tobacco, alcohol).
Large piece of posterboard divided into halves, with a big + sign on one half and a - sign on the other half.

PROCEDURE:

Explain that there are two kinds of drugs-medicines, which can make a person feel better if they are sick, and drugs, which children should not take. Medicines have directions on them to tell a person how much to take and when to use. It is important to follow the directions. (Read directions on cough syrup for instance). Too much medicine, or the wrong medicine could make a person sick.

Drugs are harmful to a person's body. Many drugs are illegal (which means they are against the law), or if they are legal, a person has to be 18 or 21 to use them.

Ask students to create a list of drugs, deciding where to place them on the posterboard. Either write the names on post-it notes of any drugs you don't have along with you or cut out pictures from advertisements . As they are categorizing each drug explain a bit about what it is useful for for instance, aspirin reduces temperature, swelling and pain, cough syrup calms a cough, calamine lotion soothes poison ivy rash, Nix kills lice, antibiotic kills germs that give you an earache or strep throat etc.) Keep asking them questions like "Would I use Nix for a headache?"

After creating an extensive list of drugs and medicines tell children that a medicine can be very good and helpful when used as directed by the person for whom it was prescribed. BUT medicines should be given to children by only a few known, trusted persons.

Have students suggest a list of possible persons who might give them medicines (for instance a mother, brother, friend, doctor, caretaker, neighbor, stranger). Write the names on the board. After completing the list discuss name by name whether the person is one from whom the child should take a medicine. Cross out the names of the ones who are inappropriate and put a happy face next to the ones who are appropriate. Caution students that there are some people, strangers in particular, from whom they should never accept any medicines, candy, or any other consumable substance without parents' permission.

Discuss the Mr. Yuk symbol telling the children that this is a sticker that should be placed on all substances that are harmful to humans or pets. Distribute stickers for the class and encourage children to work with their parents to apply them at home.

EXTENSIONS:
-Many drugs look like candies. Have a variety of pills and candies, each in an upturned milk jug lid or other cap, placed on a piece of posterboard with happy faces under the candies and frowning Mr. Yuk type faces under the drugs. Ask the children to choose one to say if it is a candy or a drug. Lift off so they can see if they were correct. Remind children to never put anything in their mouths if they are unsure what it is. If they find what they think might be candy on the ground they should notify an adult. Have children notice that medicines often have letters or numbers printed on them.
-Sing the "Mr. Yuk Song" available from the Poison Control Center and pass out Mr. Yuk stickers to use at home on appropriate products.

GRADE LEVEL: first

OBJECTIVES:
To know the difference between medicines and illegal drugs
To know from whom it is appropriate to take medicines
To know that most people do not use illegal drugs

MATERIALS:
actual containers of or pictures of medicines of various kinds (aspirin, cough syrup, vitamins, Nix, calamine lotion, antibiotic etc.) and drugs of various kinds (tobacco, alcohol).
Large piece of posterboard divided into halves, with a big + sign on one half and a - sign on the other half.

PROCEDURE: Begin as with prekindergarten and kindergarten lesson.

Add: Using alcohol may be part of your family's habits. It is important to use alcohol in moderation-a glass of wine will not make an adult drunk, but a whole bottle will. Like many drugs it can affect the way people think, act, walk, talk, and treat their family and friends. Adults should not drink alcohol and then drive cars because it makes them react more slowly to things like other cars, stop lights, and road dangers. Let children know that it is okay for adults to drink alcohol every once in a while.

GRADE LEVEL: second

OBJECTIVES:
To know the difference between medicines and illegal drugs
To know from whom it is appropriate to take medicines
To know that most people do not use illegal drugs

MATERIALS:
actual containers of or pictures of medicines of various kinds (aspirin, cough syrup, vitamins, Nix, calamine lotion, antibiotic etc.) and drugs of various kinds (tobacco, alcohol).
Large piece of posterboard divided into halves, with a big + sign on one half and a - sign on the other half.

PROCEDURE:

Begin as in prekindergarten and kindergarten lesson.

In science class second graders learned about the early uses of herbs for medicinal purposes, and how they could be made into teas, or twigs chewed on, or salves. Remind children that in modern.times medicines may be pills, liquids, creams or shots. Medicines may be swallowed, rubbed on, injected and inhaled.

1. Smoking

One kind of drug that is very bad for your bodies is cigarettes. Explain that very small hairs line the lungs. Their job is to sweep out bacteria and keep the lungs from becoming infected. These hairs die if a person is exposed to cigarette smoke or if they smoke. The little brooms that sweep out the mucus and carry it to the throat where it is either swallowed or coughed up are lost. Mucus is a sticky liquid that catches the dust and germs that get into the lungs. Smoking also harms the blood vessels. Nicotine is a habit forming chemical in tobacco leaves. It speeds up the heart and narrows the blood vessels. The heart has to pump faster to get the blood through. Smoking is irritating to the nose, throat and eyes. The biggest risk from smoking is that it can cause cancer and other lung diseases. Smokers are far more likely than non-smokers to die of cancer and heart disease. Smoking is our country's number one health problem that could be prevented. We can do something about it-never start smoking!

Have the children brainstorm a list of reasons not to smoke (to live longer, to feel better, to be a better athlete because they have more lung power and a stronger heart, to save money, to have whiter teeth, to not have a nasty smell on their breath or clothes, to not have a habit that bothers other people, to not have to worry about starting fires, etc.).

Chewing tobacco is a very bad habit that may give a person cancer of the throat or mouth. Baseball players who do it run the risk of developing cancer. It is currently illegal for high school and college players to use smokeless tobacco while playing sports.

EXTENSIONS:
-Have children write an ad for television or draw posters that encourage people to not smoke.
-Explore the uses of herbs as medicines in early times, and modern. For most of human history plants have been used for a variety of medical purposes (to cure headaches, upset stomaches, to bind wounds, to repel insects, even to treat cancers). This can be an historical unit, or multicultural unit. A visit to an herb garden is a wonderful culminating experience.

GRADE LEVEL: third

OBJECTIVES:
To know the difference between medicines and illegal drugs
To know from whom it is appropriate to take medicines
To know that most people do not use illegal drugs
To know how to seek help for problems

MATERIALS:
actual containers of or pictures of medicines of various kinds (aspirin, cough syrup, vitamins, Nix, calamine lotion, antibiotic etc.) and drugs of various kinds (tobacco, alcohol).
Large piece of posterboard divided into halves, with a big + sign on one half and a - sign on the other half.

PROCEDURE:

Explain that there are two kinds of drugs-medicines, which can make you feel better if sick, and drugs, which children should not take. Medicines have directions on them to tell you how much to take and when to use them. It is important to follow the directions. (Read directions on cough syrup for instance). Too much medicine, or the wrong medicine could make you sick. Medicines come in many forms-pills, liquids, creams and shots. Medicines may work to kill germs that have entered the body,(such as antibiotics for strep or an ear infection) or to alter the chemistry of the body (such as asthma medicines that open bronchial passageways, pain relievers that alter messages sent to brain, cough medicines that suppress urge to cough).

Drugs may be harmful to your body. Many are illegal (against the law), or if they are legal you have to be 18 or 21 to use them. Explain that drugs are substances other than foods that when taken, change the way your body works. Many change the way your mind works.

Ask the students to help create a list of drugs, deciding where to place them on the posterboard. (Write names on post-it notes of any drugs not available). As students are categorizing each drug explain a bit about what it is useful for for instance a aspirin reduces swelling and pain, cough syrup calms a cough, calamine lotion soothes poison ivy rash, Nix kills lice, antibiotic kills germs that give you an earache or strep throat etc.) Keep asking them questions like "Would I use Nix for a headache?"

After children list drugs and classify them as medicines or drugs expand: there are different types of drugs.

1. Controlled substances can only be prescribed by doctors for sick people, and we call these medicines, prescription medicines or prescription drugs.
2. Some drugs you don't need a prescription but you can buy in a grocery store or drug store. We call these over-the-counter or OTC drugs.
3. Some drugs are legal to buy if you are over 18 or 21, like cigarettes and alcohol. Alcohol can impair judgment and coordination. Children should not drive in cars with adults who drink.
4. Some drugs are prohibited or illegal, against the law to use. Marijuana or pot is an illegal drug. Its use often leads to use of other drugs. Cocaine is a very dangerous and habit forming drug. It can kill. Illegal drugs are responsible for many of our problems with crime-people become addicted and steal to get money to buy more drugs, or people become violent and act in crazy ways under the influence of drugs.

Some adults misuse drugs. They use drugs in ways they were not meant to be used, take too many of them, or take illegal drugs. They do this for the effect on their mind. Drugs affect the way people think, act, walk, talk, and treat family and friends. Most adults do not abuse drugs.

After creating an extensive list of drugs and medicines tell them that a medicine can be very very good and helpful when used as directed by the person for whom it was prescribed. Medicines should be given to children by only a few known, trusted persons.

Have students suggest a list of possible persons who might give them medicines (for instance a mother, brother, friend, doctor, caretaker, neighbor, stranger). Write names on the board. After completing the list discuss name by name whether the person is one from whom the child should take a medicine. Cross out the names of the ones who are inappropriate and put a happy face next to the ones who are appropriate. Caution students that there are some people, strangers in particular, from whom they should never accept any medicines, candy, or any other consumable substance without parents' permission.

Children may experience peer pressure to try different drugs like alcohol or cigarettes as they grow older. Discuss ways they can say no.
They can give reasons such as "My coach says drugs will hurt my game, My parents will kill me, etc." They can suggest something else to do, like playing a game or doing a project, so that the friend will know that it is the drug that is being rejected, not the friend.

Have children role-play several vignettes and discuss their responses. For instance, John and Ted are home alone. John says " Let's drink a beer-my parents will never know!" or Suzy and Kara find a pack of cigarettes on the sidewalk. Suzy takes it to her backyard and asks Kara to smoke a cigarette with her.

Discuss the importance of talking over problems and concerns with parent or friend that they can trust.

EXTENSIONS:

-Challenge children to write an advertisement for television or draw a poster that encourages other children to avoid drugs.

-Have children analyze ads in magazines about cigarettes and alcohol. How truthful is the image portrayed? (Glamorous girls smoking cigarettes-how long would their teeth really stay white; A liquor company that profiles high achievers-did they really get that way by drinking scotch?)

-Have the children brainstorm situations where they could be faced with the decision to say NO. Place ideas on 3 x 5 card. Shuffle cards and distribute to small groups of students to role play their responses. An alternative would be to present the same scenario to different groups to see if reactions are same or different. Discuss appropriateness of response, and alternatives.

-When discussing current events articles notice articles about drug-related murders, alcohol related traffic accidents, and problems with drug trafficking. Discuss the tremendous loss of lives and resources due to drug abuse.

ADDITIONAL RESOURCES:

GENERAL HEALTH RESOURCES:
Joint Committee on National Health Education Standards. The National Health Education Standards. Published jointly by the American School Health Association, Association for the Advancement of Health Education and the American Cancer Society. 1995.

Linda Meeks and Philip Heit. Health, Focus on You. . Merrill Publishing Company, 1990.
Text book series by Merrill for grades K-3. Very inclusive, and some good lesson plans.

Inside-Out
Video and teaching guide for whole person approach to health and safety. Produced by State Farm, NAESP, and ASCA.

Body Watch
Filmstrip by National Geographic Society on eating habits, exercise and rest.

HYGIENE
A number of the toothpaste companies have developed dental education packages for classrooms. We recommend:

Colgate Healthy Smiles program. 1-800-334-7734.

Head Lice: Detection, Treatment and Prevention
Video and handouts by Nix.

GERMS AND DISEASES

Videos and Books: Joanna Cole. The Magic Schoolbus Series NY,NY: Scholastic Press, various dates.
Covers digestion, circulation, and ways to stay healthy. One where the Magic Schoolbus tours inside a sick child's body covers germs and antibodies. Our school nurse expressed concern that the class is visiting a sick child, and we emphasize the need for sick children to stay home to get better and not infect other children. If this is pointed out to the class this is an excellent resource.

Healthy Habits by Dixie Cups

SAFETY
Safety belts: For Dummies or People and The Game of Your Life

Video on safety belts and on drunk driving produced by GM and AMA.

The Smoke Detectives. Free from State Farm Insurance Companies.
One State Farm Plaza,
Bloomington, IL 61710-0001.
Video and teaching guide on fire safety from State Farm. Excellent resources.

Learn Not to Burn. (1991). National FIre Protection Association. Quincy, MA. 02269.

Plan to Get Out Alive
Video on fire safety from MacDonald's. May be too intense for children, but very informative for adults!

Skin Cancer. Free community service video from Blockbuster video. Good for adults to learn about the 3 types of cancers and methods of protection

Safe and Sound. Tape and Book Set. Kim Mitzo Thompson and Karen Mitzo Hilderbrand "Twin Sisters Productions" Akron, Ohio. 1995.

Safe Kid Tips. Brochures from MacDonald's.

Stranger Danger from Nick News. Free community service video from Blockbuster Video.

Playing it Safe. Filmstrips by National Geographic.
Two 10 minute filmstrips on safety. Indoor safety focuses on poison prevention and fire awareness. Outdoor safety focuses on traffic signs and riding a bus safely.

NUTRITION

Healthy Growing Up
Lesson plans on nutrition and fitness from MacDonald's for grades K-3.

Healthy Choices for Kids
Nutrition Education Program based on 1990 U.S. Dietary Guidelines developed by Growers of Washington State Apples. Although this precedes the Food Pyramid there are still many good lesson plans and ideas.

What's on Your Plate?
Video and brochures on nutrition from MacDonald's. Short claymation vignettes about nutrition, originally broadcast as public service announcements on CBS.

Snack Stars. National Dairy Council.
Lesson plans and student pamphlets to teach children how to make healthy choices for snack foods.

DRUGS

Learning to Live Drug Free. A Curriculum Model for Prevention. Published by the U.S. Dept. of Education in 1990

A notebook of lesson plans and information for drug education from kindergarten through high school.

Flintstone Kids-"Just Say No"

Free community service video from Blockbuster video. Wilma begins to hang out with a "cool" crowd, and they try to get her to experiment with marijuana. Strong anti-drug message, appropriate for young children.

Growing Up Drug Free. A Parent's Guide to Prevention.

Booklet produced by the U.S. Dept. of Education. Excellent advice to parents about teaching values, and behaving in a manner consistent with what they are telling children.

Chew or Snuff is Real Bad Stuff, Beat the Smokeless Habit, Spitting into the Wind. Pamphlets from The National Cancer Institute and The Public Health Service.

Very graphic pictures of mouth cancers and other problems associated with smokeless tobacco. Aimed at male high school students.

Experiments and Demonstrations in Smoking Education. U.S. Dept. of Health and Human Services.

38 demonstrations and experiments to do with students.

Family Talk About Drinking. Anheuser Busch

Video and booklet for parents.

How You Can Help Discourage Kids from Smoking. R.J.Reynolds

Posters and pamphlets designed to discourage underage smoking; stresses that smoking is a choice to be made when a person is an adult.

Organizations with helpful publications and materials:

American Association of Poison Control Centers
3201 New Mexico Ave. N.W. Suite 310
Washington, D.C. 20016
202-362-7217

American Cancer Society
1599 Clifton Rd. NE
Atlanta, GA. 30329

American Council for Drug Education
204 Monroe St. Suite 100
Rockville, MD 20852
301-294-0600

American Heart Association
Contact your local chapter or the National Chapter at:
7320 Greenville Ave.
Dallas, TX 75231

American Medical Association
515 North State St.
Chicago, IL 60610
312-464-4470

American Red Cross
431 18th St.
Washington, D.C. 2006
202-737-8300

American School Health Association
P.O. Box 708
7623 State Rte. 43
Kent, OH 4420
216-678-1601

Bicycle Helmet Safety Institute
4611 7th St. Arlington, VA 2204
703-486-0100

Food and Drug Administration
5600 Fishers Lane
Rockville, MD 20857

301-472-4750

National Dairy Council
6300 N. River Rd.
Rosemont, IL 60018

National Fire Protection Association
1 Battery March Park
P.O. Box 90101
Quincy, MA 02269-9959
800-344-3555

National Safe Kids Campaign
111 Michigan Ave. NW
Washington, D.C. 20010
202-884-4993

National Safety Council
444 North Michigan Ave.
Chicago, IL 60611
312-527-4800

U.S. Department of Education
Drug Free Schools
400 Maryland Ave. S.W.
Washington, D.C. 20202
202-734-4599

LESSONS TAUGHT BY RESOURCE TEACHERS

The science teachers touch upon health and safety issues in a number of different classes, and make efforts to consistently cover the following:

When teaching classes on electricity (first and second grade) we stress electrical safety rules such as:

- never touching an electrical socket or putting anything in it, or allowing a friend or sibling to do so.
- never playing on or near power lines
- never using electrical appliances near water or with wet hands
- never overloading extension cords

When teaching classes involving chemistry (first, second and third) students are taught the correct way to smell solvents, by wafting a bit of the scent towards their noses. If appropriate, they will be expected to use goggles for eye safety. All students are cautioned against ever putting an unknown substance into their mouths.

When conducting a burn test for "mystery powders" and "mystery mixtures" safety rules such as wearing goggles, pulling back hair and loose clothing are explained and followed. Match and fire safety is stressed.

Students must wear eye protection when dissecting cameras and other appliances, and when smashing rocks. The reasons for wearing eye protection, and the fact that eyes cannot be regenerated are discussed.

Students at all grade levels who handle animals are required to wash hands, and the reasons for this are discussed. In particular, students who handle box turtles that live in the school's courtyard are urged to wash their hands to avoid the risk of salmonella.

TOPIC: Teeth

GRADE LEVEL: prekindergarten and kindergarten

OBJECTIVES:
To learn that in animals "Dentition Determines Diet", or tooth shapes determine what foods may be eaten
To become aware of how human teeth are adapted to eating a variety of foods
To learn correct dental hygiene

MATERIALS:
Mirrors
Apples and corer or baby carrots
skulls or pictures of skulls of various animals (shark, raccoon, sheep, cow, horse, etc.)
model of tooth
x-ray of 8 year. old's mouth
puppets of wolf, lamb and rabbit
toothbrushes, combs to which a flour/water paste has been applied and let dry

PROCEDURE:

Begin by telling the children that we are going to be learning about a part of the body. This body part is so important that an elephant gets 4 sets of these in his lifetime, and when the last set is worn down he can't eat any more and he dies. Who can guess what part of the body that is? It is the hardest thing in your body. (Answer: teeth)

Give each child a mirror. Ask them to look carefully in the mirror and determine "What is something the same about all your teeth?" Accept all reasonable answers making sure the following are mentioned: color, all attached to gum, all hard. "What is something different about your teeth" Again, accept all reasonable answers making sure that the shape is mentioned. Ask "Why might they be different shapes? Do you think different teeth have different jobs? Is the color different on any? Are some missing? Poll the children to find out who has no baby teeth missing, 1,2,3,4 etc. Who has adult teeth that have already grown in? The students may want to try counting their teeth. (20 in children, 32 in adults, 28 in adults without wisdom teeth)

Give each child a section of apple or baby carrot. Instruct children to take one bite and notice which teeth are the biting teeth and which teeth are the chewing teeth.

Tell children "We call the biting teeth incisors and we call the chewing teeth molars". What is different about the shape of the incisors and the molars? (One has sharp pointed top, the other is flat on top with some bumps).

Now explain that we are going to try an experiment. Even though we are usually told not to chew food with our mouths open, today we are going to try to bite one bite of apple or carrot with only our incisors. Ask the children "Is that easy or hard?" (Most will agree it is difficult, especially those with missing or wiggly front teeth). Now we are going to try another experiment to bite and chew using only the molars.

Have the children describe how it feels. Are those teeth well suited to do those jobs?

Scientists are very interested in the shape of animal teeth because it helps them to know what kinds of food the animals eat. If an animal, such as a dinosaur, is dead, even extinct, and all that remains are some fossil teeth and bones, scientists can still make predictions about what the animal ate when it was alive. Some animals are mostly meat eaters and they have many sharp biting teeth. Show pictures and demonstrate with hands. With fingers apart have two hands come together in a chewing motion like meat eaters. With the fingers bent, hands rub across each other in a grinding motion. That is like the plant eaters. Some animals are mostly plant eaters and they have mostly flat grinding molars. Show pictures and use the hand motions. Humans, like us, can eat both meat and plants because we have both kinds of teeth.

Explain to the children that you are going to do a puppet show about teeth. Review the rules for appropriate behavior during puppet shows.

"Dentition Determines Diet" PUPPET SHOW

* This puppet show is inspired by one by Jenepher Lingelbach in Hands-On Nature. Vermont Institute of Natural Science, Woodstock, Vermont (1986)

(Any puppets or pictures of animals representing two herbivores and one carnivore would work for this).

The stage can be a box with a piece of green fabric or astroturf on it to represent a grassy field.

Lamb: Oh this field has such delicious grass to eat. I love the clover and the tall blades of....(sniff, sniff) What's that funny smell I smell? It's not the grass. (sniff, sniff)
Rabbit: Don't eat me, don't eat me, please don't eat me. I didn't mean to come into your grassy field. I promise I will never come here again if you just please don't eat me!
Lamb: Oh, so you're what I was smelling. Rabbit smell is very different from grass smell.
Rabbit: Oh yes, and rabbit taste is very different too! Rabbits don't taste anywhere near as good as grass.
Lamb: Well, I wouldn't know anything about that. I don't eat rabbit.
Rabbit: Please don't eat me, don't eat...did you say you don't eat rabbit?
Lamb: Of course I don't eat rabbit. Why, I couldn't even eat rabbit if I wanted to.
Rabbit: You couldn't? Why not?
Lamb: Have you ever seen a lamb's teeth? They're not made for biting into rabbits or other animals.

(Hold up picture or skull of a lamb and say "See my teeth? They are great for grinding up grass all day long, but they could never pierce the skin of a rabbit or eat meat")

Rabbit: I didn't know that. Well, if I don't have to worry about being eaten by you I will

just enjoy myself in this nice green, grassy field.
Lamb: Oh, you're welcome to. Maybe I'll see you another time. Bye, bye.
Rabbit: So long. (Rabbit leaves)
Lamb: Gosh, maybe I should have warned that rabbit about the wolf that comes wandering into this field. I know that wolf would love to eat me for dinner. He might just like that little rabbit for dessert. Perhaps I better try to find that rabbit and warn her.
(Lamb leaves, rabbit and wolf appear on opposite sides of the stage)
Rabbit: Now that I don't have to worry about being eaten I'll just stay in this field a little longer. What's that I see up there? Oh, it's a wolf. I'm not afraid of him anymore. He probably can't eat me either. I'll go over and say hello. (walks up)
Wolf: Hey, what are you doing walking up to me like that?. How come you're not afraid of me? I could eat you, you know!
Rabbit: You couldn't eat me even if you wanted to. Lamb just told me how teeth are made for munching on plants, not animals.
Wolf: His teeth are made for munching on plants. My teeth are made for biting into animals-animals like lambs and rabbits!
(Hold up picture or skull of wolf or other canine. Show the sharp pointy teeth).
Rabbit: You could eat me? I'm outta here! (runs away)
Wolf: Ha, ha, ha. That little rabbit is lucky. I'm not hungry right now! Imagine thinking my teeth aren't fit for eating an animal. (Wolf walks off, Rabbit and Lamb enter)
Lamb: I'm so glad I found you. I was looking for you. I have to tell you something.
Rabbit: Yeah, well I have to ask you something. Why didn't you tell me your teeth were different than a wolf's?
Lamb: That's what I was going to tell you. Most animals know that already.
Rabbit: How was I supposed to know that?
Lamb: Because wolves are carnivores and lambs are herbivores, that's how.
Rabbit: Carnivores, herbivores. What are you talking about?
Lamb: Carnivores, like wolves, eat other animals. So their teeth are sharp and pointy, made to bite through skin. Herbivores, like us, just eat plants. We don't need sharp and pointed teeth. So, our teeth are wide and flat, perfect for chewing up leaves and grasses.
Rabbit: So if I look at an animal's teeth, and I'll know if he can eat me or not?
Lamb: Well, if you get close enough to see their teeth that might be too close! It might be a bit safer if you just ask me. I know my herbivores and carnivores pretty well, without looking at their teeth.
Rabbit: O.K. I'll do that. Thanks for the lesson!

The End

Next, explain the stations for children to visit and explore various teeth related activities. Discuss with the children what happens to gums and other soft tissue when an animal dies (it disintegrates). Therefore, there are no gums to hold the teeth in the jaw and the teeth are quite wiggly. Caution the children against removing teeth from the jaws so that all children may enjoy them.

Have tables set up with different teeth related activities such as:
1) pictures and skulls of plant eaters. Have children look at the broad grinding teeth. Remind children that plant eaters are also called herbivores.
2) pictures and skulls of meat eaters. Have children look at the sharp tearing, biting teeth. Remind children that meat eaters are also called carnivores.
3) pictures and skulls of sharks, and/or fossil shark teeth. Shark jaws are interesting because the shark may lose teeth when it attacks an animal in the sea, but it is always prepared with other teeth ready to pop up from the jaw. Every 8-10 days the shark may lose one tooth and have another in its place. If you have an actual shark jaw available the children can see the rows of teeth ready to pop into place.
4) pictures and skulls of rodents. Ask the children if they have ever had a rabbit or guinea pig or gerbil as a pet, or had one at school? If so, what did they notice the animal doing a lot? (Chewing on things). Explain that that is because a rodent's teeth never stop growing. She has to keep gnawing on things to keep those front teeth sharp but not too long. Look at the 4 front teeth, and the grinding teeth in the rear.
-dental hygiene exhibit (x-rays of teeth, tooth model, dental care instructions). Explain that since we are not like sharks or rodents, and human do not get more than 2 sets of teeth in our life time it is very important to take care of those teeth! A tooth has many parts, some we can't see. The outer layer is called enamel. This layer is dead and can't grow. Because it is dead it can't repair itself. Bacteria that live in mouth make acid which breaks down the enamel if food is left on the teeth, such as candy, spaghetti, raisins. The inner layer of tooth is dentine. This part is alive. It has nerves and blood vessels. The root of the tooth is like the roots of a tree. It goes deep into the jaw where we cannot see it. X-rays of the jaw can show the children how the adult teeth are present, even in a child. Therefore they need to eat nutritious food, and take care of the teeth.
-Brush a comb. Make a paste of flour and water. Spread it on combs and let dry. Give the children a toothbrush and comb and ask them to clean the comb. First dip it into water. Does water alone clean the teeth? When they discover it does not try brushing across. When they discover that that is also not effective try brushing up and down. An up and down motion for cleaning the teeth is best. Have children practice correct way. Floss with string and show the advantages of flossing.

EXTENSIONS:
-Good teeth foods. Make two tooth pictures, one with a happy face on it, one with a sad face. Give the children a collection of foods to classify as to which are good for the teeth, and which are bad (ie good-apple, carrot, milk etc. bad-bubble gum, raisins and other dried fruit, any kind of sticky candy). Remind children that any kind of food that leaves their mouths feeling clean and slick is good for their teeth.
-Get plaster models of teeth (sterilized) from the dentist. These can be used to examine different surfaces, to demonstrate correct brushing, and also to demonstrate why some people need braces. Many dentists are happy to donate these and other materials to schools.
-Arrange for a dentist or dental hygienist to visit the class and discuss dental hygiene.

TOPIC: Bones

GRADE LEVEL: prekindergarten and kindergarten

OBJECTIVES:
To learn that we all have skeletons inside our bodies
To learn that bones come together in several types of joints
To learn that even though different animals have different sizes of bones we can recognize what part of the body they are from by their shape

MATERIALS:
Skulls, femurs, pelvises, scapulae, vertebrae, ribs from a variety of different sized animals-mouse to cow
paper skeletons from Halloween
A life size doll
bones soaked in jar of vinegar
x rays
torso model of human body with organs exposed or picture of internal anatomy
Mr. Bones, a life sized model skeleton
hinge from a door
desks set up as stations with one skeleton per station: rabbit, cat, chicken, fish, skulls of horse and cow

PROCEDURE:

(This class is a big hit at Halloween time)

Ask the children what holiday is coming soon? (Halloween) and what do we see a lot of this time of year? (skeletons) The children may have thought that they were just make believe scary creatures like the ones on display, or just for Halloween, but guess what? They are real, and you wouldn't be you without one inside of you. Feel your head. Do you feel those bony eye sockets? Feel your back. Do you feel those bumpy back bones? Feel your ribs. Can you feel them all around on the upper part of your abdomen, but none lower down? How about your knee caps? Even your toes have bones.

Your skeleton has two important jobs. Who can guess what they are?
1. It holds you together, helps you move. Without a skeleton you'd be like this doll. (Try to have her stand up, let go and she crumples into a heap)
2. Your bones also protect your organs such as your brain (skull), and your heart and lungs (ribs).

Your bones are not the only things inside of you. Look at the torso model or picture. You have a heart, lungs, blood, liver, stomach, but today we will just be talking about the bones.

What do we call all your bones together? (a skeleton) Guess how many bones you have? (take guesses). Look at one hand. Is each finger a bone? (no, it couldn't bend it if it were). There are 206 bones in an adult, more than 300 in a child. Many are soft cartilage. Have children feel their ear and nose to feel cartilage. They grow together over time. Has anybody ever felt the soft spot on a baby's head? The skull is made from four parts that grow together after baby is born. (Show fusion lines on skull model).

Where are most of the bones of the body? More than half of all the bones that are in your body are in the hands and feet. Why are there so many little bones? So that the fingers can move. Imagine trying to play piano or write with a pencil if you couldn't bend your fingers. (Have the children play act this).

The little bones come together at joints, and muscles make them move. We have different kinds of joints:

hinge joints are like a door hinge (show hinge). You can open a door in or out but not up or down or in other directions (demonstrate with hinge).

Stand up, reach out so that you are not touching anyone and find your hinge joints (knee, elbow, fingers-56 hinge joints per hand!)

Next, make a fist. That's your ball. Now cup your other hand. That's your socket. Move the ball around in the socket. Try moving sideways, up and down, etc. Where do you have ball and socket joints on your body? (hip, shoulder).

Now face front, and without moving your body see if you can turn your head only to look at the rear of the room. That is the pivot joint in your neck that allows you to turn like that. Which animal can turn it's neck a lot more than we can with a pivot joint? (owl).

Next, give each child one bone telling them to handle it carefully. See if they can figure out something that is the same about all of the bones (color, hard, all were alive, all contain calcium-show bones soaked in vinegar to show how soft they become if calcium is dissolved, all have spongy marrow inside to make red blood cells- show inside of beef bone).

Now, can you think of something different (shapes, sharp vs. smooth, etc.)

Even though these bones are different sizes we can find ones that are different shapes, and that might be the same kind of bone, but just from a different animal. For instance, once we see that ball at the end of a bone we know we found something that's going into a ball and socket joint. Have all children holding a femur stand and show their bones to others. Or once we find this triangular shaped scapula we know we've found the shoulder blade. What's special about the ribs? (flat, rounded) and the vertebrae (have hole in the middle for spinal cord).

Have children move through stations finding their type of bone in each animal skeleton, and noticing the same shapes but different sizes of bones.

Assemble back together as a group to sing "the toe bone's connected to the foot bones..." Best done while demonstrating on Mr. Bones, a lifesize plastic skeleton model.

ADDITIONAL RESOURCES:

Balestrino, Philip The Skeleton Inside You New York: Thomas Y. Crowell, 1989.

An introduction to the human skeletal system, explaining how the 206 bones of the skeleton join together, how they grow, how they help make blood, what happens when they break, and how they mend. Probably the BEST book to read aloud to this age group.

Markle, Sandra Outside and Inside You New York: Bradbury Press, 1991.
Fabulous color photographs of various parts of the human anatomy. Good simple text to read aloud.

Parker, Steve. Skeleton New York: Alfred A. Knopf, 1988.
Part of the excellent Eyewitness series. Fabulous photographs. Discusses the evolution, structure and function of human and animal skeletal systems. A good book for small groups of children to look at.

TOPIC: sound

GRADE LEVEL: prekindergarten and kindergarten

GOALS:
To understand that all sound begins as vibration
To understand how sound travels
To create some simple sound instruments
To learn about the structure of the ear

MATERIALS:
variety of instruments that clearly demonstrate vibration: guitar, cut off balloon neck, ruler, wineglass with water, chicken squawker, etc.
funnel, tubing, balloon with neck cut off, salt
toilet paper tubes, rubber bands, waxed paper sheets
paper cups, lengths of string cut to about 80 cm, paper clips
model or picture of the inside of an ear
coat hangers with 1/2 m. strings tied on each corner
tuning forks

PROCEDURE:

Tell the children "watch and listen as I do something, and tell me what you see and hear", then do any of the following: twang a ruler over the edge of a desk, blow on a cut off balloon mouthpiece, rub your wet finger around the rim of a wineglass with water in it, strum a guitar (or shoe box lid version made with rubber bands), make a chicken squawker squawk (see directions below).

As children tell you that they heard noises, and they saw something move, explain that all sound is caused by something moving or "vibrations". You can feel your voice box vibrating as you speak-have children put fingers over throat and hum, first a low tone, then a high tone, whisper and speak in a normal voice.

How do we know that sound has been made? What part of our body tells us? (Our ears) Sound travels in waves, from the thing that is vibrating to our ear where it makes our ear drum vibrate and sends a message to our brain. The waves move like this: have a jumprope or string attached to chair, move in wave patterns to represent waves, or drop a pebble into a pan of water and watch waves move out. We can't see the waves of sound because they are traveling in air, but we can imagine them like this: demonstrate with a funnel with balloon skin stretched over it, length of tubing attached to small end of funnel. This balloon skin is like your eardrum. When the sound hits your eardrum (sprinkle a little salt on to balloon skin) it makes it vibrate like this-hum into tube and move in front of children so that they can see salt vibrating on balloon skin.

Here is what is inside that ear-demonstrate with model or picture. The ear has three parts-the outer ear, or part we see, (this helps to funnel sounds towards inside), middle ear where the eardrum is, and the inner ear which has little tiny bones that vibrate and send a message through a nerve to your brain. (Show how one of the little bones looks like a stirrup, and is the smallest bone in your body). When the sound stops the ear drum stops vibrating. Caution children that the eardrum is extremely delicate, and never to stick anything sharp into ears or it could rip and they could lose their sense of hearing. Also warn them of the dangers of listening to sounds that are too loud. They can damage the eardrum.

How does sound travel? (in waves). What is the sound traveling through now to get from my voice box to your ears? (air) Do you think the waves can travel through other things: liquids, like water, or solid things, like tables or strings? (Discuss with children whether they have been able to hear underwater when swimming, and how people used to tell if a train was coming by putting their ears to the traintrack.)

We can use this tuning fork to hear how sounds travel through solids. Hit it gently on edge of table, have the children raise their hand when the sound hits their ear. Now children place one ear against a long table, and again raise hand when hear sound through the table. Hit tuning fork, then place stem against the table.

We can also show how sound travels through a solid, like string. Try putting strings attached to coat hangers carefully into ear canal. Hold in place with fingertips. Making sure that coat hanger can swing freely, let it bounce off of different surfaces. You will hear noises like church bells traveling through strings. Someone standing next to you can't hear the sounds since they are traveling through the string, not the air. (Management tip-have children hang coat hangers on overturned chair leg to avoid tangling strings).

Have children make several instruments and try to see which part is vibrating.

Possibilities for homemade instruments: shoe-box lid guitar with different width rubber bands; homemade kazoo of toilet paper tube with sheet of waxed paper over one end held in place by rubber band; chicken squawker made from cup with small hole poked into bottom, string threaded through and tied and held in place by paper clip. Chicken squawker makes a noise like a squawking chicken when the string is pulled by running moistened fingers down the length of string. String can also be plucked.

Children can also be challenged to create their own instrument. Have a wide assortment of recyclable and natural materials available and see what the children create.

When all students have created their instruments play a favorite song together.

ASSESSMENT:

Take a sound walk around the school. Call on children to identify sounds, and what is making the sound. Children should be able to verbalize what is vibrating and what the sound is traveling through.

Have student create an instrument of their own from recyclable materials. They should play the instrument for the class, explain how it makes sound, and demonstrate how to vary the sound if possible.

EXTENSIONS:
-Make a whole orchestra of instruments from junk-rubber band guitars, drinking straw oboes, water bottle xylophones, coffee can drums (with balloon skin)
-Challenge children to create an instrument that is loudest, softest, most capable of playing a recognizable tune, most like a bell or whistle or guitar, makes the widest range of sounds etc.
-Look for natural objects to create sounds-gourds, seed pods, pine needles to brush, sticks to hit together, etc.
-To see how important the integration of one sense with others is, try watching a movie without the sound. Can the children follow a scene? Show it again with sound playing. Try another segment with sound only, no picture, then again with both.
-Use a tape recorder to record various familiar sounds. How many can the children identify? Can they say what is vibrating each time?
-Challenge children to see how many different sounds they can create just using their bodies (finger snaps, whistles, hand claps, lip smacks, humming, foot stomp, etc.)
-Challenge children to see how many different sounds they can create using the same object.
-Make tin can telephones. Poke holes in the bottom of two tin cans, thread a long length of string through and tie. Have children hold string taut and one can talk while other listens in the tin can telephone. Caution the children never to yell into it as the telephone will amplify sounds and hurt other child's ears.
-Examine a variety of musical instruments to determine what part creates vibrations
-So on a sound walk, listening for man made and natural sounds
-Play "telephone". Seat students in a circle. Whisper a simple tongue-twister into a students ear. They whisper it into the next person's ear, and so on around the circle. They are only allowed to say it once and the next person must pass on what they believe they heard. Compare the response given by the last student with the original message.

Studies of the five senses have numerous possibilities for extensions, for example
-Go on a sense walk, focusing on just one sense such as hearing, smells, touch or sight
-Learn the anatomy of each sensory organ-lens, retina, optic nerve of eye, taste buds for sweet, salty, sour and bitter tastes, pressure and pain receptors in skin, olfactory nerves for spicy, flowery, fruity, resinous, putrid and burnt smells.
-Learn how and why to protect our sense organs from loud sounds, bright lights, strong odors, etc.
-Learn how people who have sensory disabilities cope, such as with seeing eye dogs, hearing aids, braille, sign language, etc.
-Make sensory "mystery boxes" to match and/or identify, such as different scents (perfumes, flavor extracts, spices, coffee grounds) in film containers with holes punched in lids, or texture boxes with a hole and tube sock attached for hand to reach in a feel different objects, or plastic Easter eggs, opaque jars or film containers with different materials inside (rice, beads, coins, pebbles etc.)to shake and match

-Describe an edible object (piece of candy, or an apple slice) using all five senses
-Explore differences between human senses and animals with "super" senses (ie hawk's vision, dog's sense of smell, bat's hearing, spider's sense of touch, snake's ability to feel vibrations not hear)
-Cooking experiences offer many opportunities to experience the five senses

TOPIC: Individual Differences

GRADE LEVEL: Third

OBJECTIVES:
-To introduce students to the idea that humans are all alike in some respects and at the same time we are each unique because of our differing genetic make-up.
-To expose students to the concept that all living things are made up of cells.
-To introduce the notion that the inheritance of genes follows certain rules.

MATERIALS:
-A copy of a dichotomous key such as the sample key for each student

PROCEDURE:

(Background information for teachers: Human cells contain 46 chromosomes, half of which come from each parent. Chromosomes are composed of a thread-like substance called deoxyribonucleic acid (DNA). Each chromosomal strand of DNA includes several thousand segments called genes, each with a particular function in the chemistry of the body. Some of these gene segments determine human traits such as eye color. Man has around 75,000 genes scattered through the 46 chromosomes in each cell. It is the information that is stored in the DNA of these chromosomal genes that makes each of us unique.)

Introduce this class with a discussion of ways humans are alike and ways they are different. Depending on the age of the students, briefly review how our bodies are made up of many types of cells. Explain that in the nucleus of each cell are tube-shaped structures called chromosomes. Each chromosome is made of a single thread of a biochemical substance known as deoxyribonucleic acid or DNA. The DNA material of the chromosomes carries instructions in the form of gene recipes which determine what we will be like. For example, the gene recipes on each pair of chromosomes determine inherited traits such as the presence or absence of dimples, eye color, tongue-rolling ability, and whether we have attached or free earlobes.

With older students this discussion might also touch upon the fact that a human life begins when the 23 chromosomes in a sperm cell combine with the 23 chromosomes in an egg cell to produce a fertilized egg with 46 chromosomes. This fertilized cell subsequently divides into the 100 trillion cells of which our bodies are composed. Each of these cells carries copies of the original 46 chromosomes which contain the complete set of instructions for making that person.

Students should be introduced to the fact that humans have two copies of every gene recipe on each pair of chromosomes, one from our mother and one from our father. Both gene copies can be used by our cells. In some cases one gene recipe tends to be dominant and is therefore expressed while the other is recessive and is not expressed. Explain that if both parents have genes for blue eyes their offspring will have blue eyes and if both parents contribute genes for brown eyes their offspring will have brown eyes. However, if one parent has blue eyes and the other parent contributes the dominant gene for brown eyes, the offspring will then have brown eyes.

Tell the students that they are going to determine which of a set of physical traits they possess, pool their information with that of their classmates and examine the over-all make-up of the class. Some inherited traits students might investigate include the following:

1. tongue-rolling ability (can they roll their tongue into a U shape, using the lips if necessary)
2. right-thumbed (the right thumb lands on top from the student's viewpoint when student quickly clasps his hands together interlocking the fingers)
3. presence of dimples
4. earlobe attachment (part of the lobe hangs down below where the lobe attaches to the neck)
5. the "vulcan handsign"-the ability to open a V space between the middle and ring fingers so that you have two fingers on one side and two fingers on the other side of the V)
6. presence of a widow's peak (the hairline forms a definite point in the center of the forehead)
7. presence of hair on middle joints of fingers
8. bent little fingers.

Have the class choose several of these traits, and have each student fill them in on their individual dichotomous keys. Alternatively, the teacher might chose the traits and prepare the keys in advance. Next have students figure out and mark where they fit on the key. Prepare a large dichotomous key and have each student post their location on it. Construct a circle graph to portray the number of students in each subgroup of the dichotomous key.

Discuss the data resulting from these activities. Did a group of students cluster in a particular area? If so, can you think of a trait that makes them different from each other? Can students guess which of these traits might be considered to be dominant? Many authorities consider ability to roll tongue, right-thumbed, presence of dimples, unattached earlobes, ability to make a V with fingers, presence of a Widow's peak, presence of mid-digital hair, and bent pinky as dominant. What might happen if students repeated the activity with a larger sample? Can students suggest other traits it might be interesting to chart?

EXTENSIONS:

-Analyze the data obtained in the dichotomous key by creating a two- or three-ring Venn diagram to study the interaction of two or three traits.

-Make a bar graph that shows how many students have each one of the traits you examined.

-Construct a circle graph to portray the number of students in each subgroup of the dichotomous key.

-Have students fingerprint themselves and using a fingerprint chart from a textbook or encyclopedia determine which of the four types of fingerprints (whorl, loop, arch, or composite) their print resembles. Have the students chart the results. Fingerprinting

may be done by carefully pressing a finger into a smudge of graphite formed by rubbing the flat side of a soft pencil lead onto a piece of paper, then pressing the finger onto the sticky side of a piece of scotch tape, and taping it to a blank piece of paper.
-Order a package of phenylthiocarbamide (PTC) paper from a biological supply company for several dollars. Determine who is a taster of this chemical by having each student touch a piece of PTC paper to their tongue. If they have at least one of the dominant genes that enables them to detect the taste (which is markedly bitter for those individuals), they will want to wash the taste away either with a glass of water or by sucking on a piece of hard candy as quickly as possible. Research carried out in the labs of Dr. Linda Bartoshuk at Yale University with a compound similar to PTC has shown that about a quarter of the population will taste nothing at all, half are medium tasters, and a quarter are supertasters and will react strongly to the taste of these compounds. It has been found that supertasters have as many as 1,100 taste buds per square centimeter of tongue, while nontasters have as few as 11 buds per square centimeter.

ADDITIONAL MATERIAL:
-Balkwill, Fran and Mic Rolph. Amazing Schemes Within Your Genes, HarperCollins Publishers Ltd., London, 1993.

TOPIC: The Digestive System

GRADE LEVEL: First

OBJECTIVES:
-To become familiar with the digestive system and other major body organs
-To learn how food is used by the body and why good nutrition is so important

MATERIALS:
-Copies of pretest for each student (Outline of the human body)
-Crackers (one per student)
-Paper cup per student and ice water
-Brown paper grocery bag per student cut into a vest (cut off bottom and make a slit from the bottom to the top; fold into a vest with writing on the inside and cut out neck area and armholes; staple shoulder seams together)
-Templates and construction paper for tracing digestive organs (to make templates trace or sketch from a textbook or other source a heart, liver, stomach, and a pair of kidneys, and then enlarge if necessary to three or four inch size on a xerox machine)
-Scissors to cut out body parts
-Two straws per student (for esophagus and windpipe)
-Bubble packing plastic or thin foam rubber carpet backing or other suitable material for cutting out a pair of lungs per student
-Segments of thick yarn or plastic tubing to represent large intestine (20 inches per student)
-Assorted balls of thinner yarn for stretching out and measuring off 21 feet of small intestine per student
-Small plastic bag per child to represent the body cavity which holds the 21 feet of small intestine
-Staplers and scotch tape
-Craft sticks and small sections of white paper for drawing paper hamburgers or other food substances to be moved through the digestive system
-Props for play: a plastic or real apple, a set of teeth (the dentist may share plaster molds which are perfect for this), a salivary gland made by taping together several medicine droppers, a throat (oatmeal box) with two paper towel tubes for the windpipe and esophagus, a plastic hot dog, water balloon with about 6 cups of liquid in it, roll a piece of carpet about 5 inches square so fibers (villi) protrude inside the roll to simulate villi in small intestine, a nylon stocking, blender, food, a liver made from cardboard with a paper cover that lifts up to reveal "super liver" sign, a cup with a small amount of vegetable oil floating on the surface of some water, detergent and dropper, a tube about five feet long for the large intestine, a 21 foot long tube with a smaller diameter for the small intestine, two paper kidneys.

PROCEDURE:

(These activities may take place over three to six class periods). These classes are devoted to learning about our bodies and what they do with the food we eat. Begin by assessing what students already know and what needs to be taught, students are given an outline of the human body and asked to draw where they think food travels after it has been chewed.

Before beginning the playlet discuss the fact that we all have the same body parts, and in most cases they work the same way. It is important to understand how our bodies work, how to keep them healthy and what to do if a problem develops. Ask children what does digestion mean? Why do we have to eat? (to have energy to move, grow and repair cells). Explain that we all need to eat, and we all have to get rid of the food we don't use. Students are told that if they feel the urge to giggle or be silly, they should quietly leave the group, and return only after they have gotten back into control. Review the rules for being an audience of a playlet.

* This playlet was inspired by "The Journey of Harriet Hamburger" by Kay Von Deylen, Science and Children, January1985.

Playlet: The Journey of Annie Apple

Narrator: Do you all have good imaginations? We'll have to use them today as we go on a trip through the human body.
Give each child an oyster cracker, tell them to put it on their tongue, and keep it in their mouth without chewing. They should be ready to describe what happens.

HH: Hi, I 'm Annie Apple. Just wait until you see what happens to me when you eat me for lunch. Come along with me on my incredible journey through your body.

TT: We're Terry the Teeth. We like to tear things to pieces. Oh look, someone's coming in to meet us! What do you want?

AA: I just came to be digested. Can you help?

TT: We sure can! With a little help from Sally Salivary gland. Hey Sally, come on over here, Harriet needs a treatment.

SS: Hi! We're here to give you a bath. (Squirt SS over HH).

AA: (spluttering) But...I don't need a bath!

SS: A bath will help change your starch into sugar. (To children: do you feel your mouth watering around that cracker? Well, that's me Sally Salivary gland, going to work. Now that you've felt me you can invite Terry the Teeth to help chew up those crackers in your mouth.)

AA: Hey Sally, this bath feels good! But...what are you doing Terry?

(teeth begin to chomp AA)
TT: We're tearing you to pieces so that you can begin your journey. My mother always says to chew my food well before swallowing....

(Hold up throat and look in to see windpipe-with do not enter sign- and esophagus-with one way sign)
AA: Oh my! I'm breaking up into pieces and I'm falling and look! What's this one way sign here? There's a little flap that only lets food travel one way back here, so I can't go up the nose. And there's another flap that covers the windpipe so I can't get into the lungs. What happens if I try to go down Wiliam windpipe-choke, cough, sputter-Oh now I see why Mom tells me not to talk while I eat. The little flap opens and food can go into the windpipe and I choke.
So now I am going the right way but help, I'm being squeeeeeeezed!

EE: Yup! That's me, Eddie Esophagus. I can get you from here to there in seven seconds flat-and I can do my job right side up, or sideways, or even upside down.

AA: You're hurting me!

EE: Sorry!

SS: ROAR!

AA: What's that roaring sound? It sounds like a hungry lion!

EE: Not quite! Meet Susie Stomach!

SS: Growl! I'm Susie Stomach, and I'm hungry!

AA: I don't like the looks of this!

SS: Stop complaining! Be brave and let me digest you. You might as well be quiet while I break you down. After four hours with me you won't recognize yourself.
(use hand to squish SS)

AA: Four hours! You mean I have to stay in here that long? Ouch! what are you doing?

SS: Oh, those are just my gastric juices. Like Sally Saliva I make chemicals that help break you down.

HH: Hey, why is it so slippery in here?

SS: Oh, that's just a greasy coating I put on myself. If I didn't have it I might digest myself and burn a hole right through myself. That would hurt a lot.

AA: Hey, it's getting crowded in here (add balls of other food)

SS: No problem! When I am empty I can be as small as a hot dog (show) but I can stretch like a balloon to hold up to six cups (show water balloon).

Demonstrate how food is churned to puree in blender. Use that day's lunch menu if possible.

SS: Well, four hours have passed and I'm done with you. You'll feel completely new when you go through this valve.

AA: Well, this doesn't look too bad-it's kind of like a roller coaster.

SS: Yes, I 'm Sam small intestine and you have entered the most important part of the digestive system.. You will be here over the next 24 hours, so relax and enjoy your journey. First, I'm going to call on my good friend Larry Liver. Larry?

LL: Here I am-Ta da! I am an organ of many talents! I perform over 500 jobs in your body. I am the largest gland in your body. I am four times bigger than the heart. I weigh more than 3 lbs. I help your body digest food. I make a special green juice called bile which I squirt into your small intestine. Bile helps digest fats. (Squirt green detergent into oil on water). I also store vitamins and mix these with your blood. I help make glucose, a kind of sugar which you need for quick energy. And, last but not least, TA DA (reveal superliver) I am the guardian of your blood. If I see a poison about to sneak into people's blood I neutralize it! No poison escapes me!

AA: Wow, Larry Liver, it sounds like you're a friend we can't live without.

LL: That's true! You can't live without me performing all my important jobs.

AA: Well, now that I've met Larry Liver I'm off on a roller coaster ride.

SS: My villi will help you along on your ride. They're soft, like velvet. The walls are very thin. When we finish with you we can push you right through our walls and into the bloodstream. (push mashed food from blender through nylon stocking into rubber bin). Then, once you are in the bloodstream Harriet, you can help the body have energy to grow, play and repair itself. (Show roll of carpet with "villi" projecting inside the tube).

AA: I'm always glad to help! Ouch, ouch-I'm disappearing......

LLI: Well, somebody's got to clean up around here, and I guess it's got to be me, Libby Large Intestine. I take all the stuff that's left over after you have digested some food and carry it off to the dump. But, before I do that I remove the water and give it back to your body. (Demo with solid food left in nylon stocking.)

Kim and Kip Kidney: Don't forget us either! We're twins, Kim and Kip Kidney and we clean up your blood after it has been passed around your body. Some water, vitamins and minerals are returned to your body, and the rest becomes a yellowish fluid called urine. We drain down to your bladder. When your bladder is full, you go to the bathroom to get rid of the urine.

Review all the steps on a torso model of the human body or large picture: So, Annie Apple was chewed by Terry the teeth, dissolved by Sally Saliva, swallowed by Eddie esophagus, digested by Susie Stomach, had the fat dissolved by bile from Larry Liver, then absorbed into the bloodstream through the yards and yards, 21 feet, of small intestine, and brought to cells all over the body to help you grow. The parts of Annie that weren't used went on to Libby large intestine and came out as poop. Some parts may have passed through the kidneys and where the blood was cleaned and extra liquid left the body as urine. We can't recognize Annie Apple anymore-but remember-You Are What You Eat!-so eat healthily!

Following the playlet students create wearable body vests by cutting out and labeling a paper heart, Larry Liver, Susie Stomach, two lungs and two kidneys (Kim and Kip). Students help each other unwind and cut off 21 feet of small intestine yarn, and a 20 inch segment of plastic tubing large intestine. The small intestine is placed in the plastic bag "body Cavity" on which they write "small intestine". Each student collects two straws, one for Eddie Esophagus and the other for William Windpipe (this straw may be split half way up so half of it can connect to one lung and the other half to the other lung).

Have students place the organs where they think they should go on their vest, and raise their hand so this can be verified before they proceed to staple them in place. Help students think through Annie Apple's journey, and recall that the esophagus connects to the stomach, which empties into the small intestine (tape one end of the yarn to the exit from the stomach). The body cavity bag holding Sam Small Intestine should be taped across the back about three inches from the bottom front center of the vest so that it hangs open. Louis Liver sends bile juices into the small intestine which can be depicted by taping bits of green paper "bile" exiting the liver towards segments of the small intestine. The other end of the yarn small intestine should be taped to the entrance of Libby Large Intestine, located on the child's right side. The large intestine is positioned in the shape of an upside down U, and a small pipe cleaner "appendix" may be taped just below the junction of the small and large intestine.

Students create a paper apple or other food substance, attach it to a craft stick, and are ready to share their version of Annie Apple's (or Paul Pizza's or whatever name they have chosen) trip through the digestive system.

EVALUATION:

Observations are made as students assemble their organs on their body vests, and as they tell their own version of the trip of their food substance through the digestive system.

To conclude these studies students are again asked to draw the path food follows as it moves through the digestive system. This post test is another way to assess the effectiveness of this unit.

EXTENSIONS:

-To help students understand how digestive juices break down food have them place some bread, water and a couple drops of food coloring (to represent the digestive juices) into a ziplock bag. Have students squeeze their bags (just as the stomach muscles work the contents of the stomach) until the ingredients become the consistency of soup.

-Invite a parent with medical expertise to visit the class and share their area of expertise with students.

-Examine food labels with students and determine which foods are good sources of important nutrients.

ADDITIONAL RESOURCES:

-Allison, Linda. Blood and Guts (A working Guide to Your Own Insides). A Brown Paper School Book, The Yolla Bolly Press:Boston, 1976. Stories, experiments and projects that bring the parts and systems of the body to life.

-Showers, Paul. What Happens to a Hamburger?, Harper Trophy, New York, 1991. Youngsters find out how digestion works through story, experiment and simple illustration.

-Cole, Jonna. The Magic School Bus Inside the Human Body, Scholastic Inc., New York, 1989.

TOPIC: The Circulatory System

GRADE LEVEL: Third

OBJECTIVES:
-To develop an appreciation for the circulatory system and an understanding of how it works
-To learn why healthy hearts are important and how to keep the heart healthy
-To develop an understanding of the composition of blood

MATERIALS:
-Copy of the script entitled "Ronnie Red Blood Cell's Trip Through the Circulatory System" for each pair of students
-Copy of a large sketch of the heart which shows the four chambers and major vessels feeding the heart for each student
-A penny "red blood cell", red paper dot "oxygen molecules", and blue paper dot "carbon dioxide molecules" for each student
-Ingredients for making pretend blood (honey, candy red hots, popcorn or small marshmallows, rice or tapioca), 100 ml measuring container, and plastic cups for students

PROCEDURE:

(This unit may extend over 3 to 6 class periods). Begin with a discussion of what students know about their heart. Include in this discussion the following facts. A human heart is a hollow muscle about the size of your closed fist (have students make a fist). It is capable of pumping 5,000 to 6,000 quarts of blood each day through over 60,000 miles of tubes called blood vessels. Together the heart and blood vessels form the body's circulatory system. Blood vessels carrying blood to the heart are called veins, those carrying blood away from the heart are known as arteries, and the connecting vessels are capillaries. Explain that students are going to take turns reading the script of a skit entitled "Ronnie Red Blood Cell's Trip Through the Circulatory System".

* This playlet was inspired by " An Interview with A Heart" Current Health I, Vol. 5, No. 1, September, 1981.

RONNIE RED BLOOD CELL'S TRIP THROUGH THE CIRCULATORY SYSTEM

The skit begins with Ronnie Red Blood Cell (RRBC) exiting the bone marrow as a mature red blood cell that has just been manufactured within the depths of the bone. Ronnie is about to begin the first of many trips from remote outposts of the body to the heart. Ronnie floats along with white cells and platelets, suspended in some 10 pints of watery fluid called plasma. He will make a circuit of the body every 30 seconds for nearly four months, after which he will be destroyed by the white blood cells.

RRBC: What an interesting shape I have - like a donut shaped sled, but much smaller and thinner. I wonder what I will be doing during my short life in this watery fluid called blood?

White blood cell (WBC): You certainly do have a unique shape. I have been around much longer than you. I notice other donut shaped cells moving sluggishly back to the heart pump from distant parts of the body. They are loaded down with carbon dioxide molecules the cells have passed to them.

RRBC: So that is what the cells have been handing over to me - carbon dioxide molecules. I am glad I can help them get rid of their wastes. But whatever am I going to do with all these suffocating molecules?

WBC: Perhaps you will find out when you reach the heart.

RRBC: Wow! This must be the entrance into the heart pump. I got through that opening just as it was about to slam shut. This seems to be a fairly large chamber I am in.

HEART: Welcome to the most impressive pumping station in this body. I am only 10 years old and I have already beat over 420 million beats and pumped about 2 million barrels of blood. There are 60,000 miles of blood vessel tubes connected to me, enough to wrap around the world more than two times.

RRBC: It must be exhausting pushing blood through such a long skinny pipeline. Do you ever rest?

HEART: Not really. I take tiny rests between every beat, but I must stay busy to keep our owner alive. You see, I am really two pumps side by side. The right side, which you just entered, collects the unoxygenated carbon dioxide rich blood and pumps it to the lungs. In the lungs your carbon dioxide molecules will be unloaded and you will pick up oxygen molecules which you will deliver to cells in various parts of the body.

RRBC: Oh, it is great to be useful! That means I am about to be sent to the lungs - (SWOOSH) - Hey, I just got pulled through a parachute shaped valve into a second chamber. What was that lub sound?

HEART: You heard the valve between my two right chambers slam shut just after you exited the upper chamber or atrium and entered the lower chamber or ventricle. You see, the atrium is like a tiny receiving room. When I relax, the blood is pulled into the lower chamber, called the ventricle.

RRBC: Yikes! Thank heavens that valve did not slam shut on me. Here I go again -

(SWOOSH)- and now I hear a dub sound. Where am I headed next? Must be the lungs where I can get rid of these carbon dioxide molecules and collect some of those oxygen molecules to deliver to the cells. This is easy, and I am very proud of the work I am doing. Now I am being washed back to that friendly pumping station called heart.

HEART: Welcome back! You have now entered the left atrium. My left side is the stronger side. It takes oxygen rich blood from the lungs and - (LUB)- there you go down into the ventricle -(DUB)- and shooting out the aorta, carrying all those oxygen molecules to cells all over the body.

RRBC: Those valves sure are neat! They make a lub sound when the doors between the atriums and ventricles slam shut, and a dub sound when the doors exiting the ventricles slam shut. I wonder what determines how often they slam shut? So far I seem to be moving at a fairly regular pace.

WBC: That is because our owner has been resting. Everybody's heart has its own natural pace with some beating 60 times a minute, and others as many as 90. Adult hearts beat slower than children's hearts.

RRBC: Hey! I seem to be moving much faster.

WBC: Right you are! Our owner must be exercising or watching a very scary movie. The brain sent a message to the control center on top of the heart telling it to contract at a speedier pace. Even though the control center, which is known as a pacemaker, is only about the size of a pea, it can send out electrical signals telling the heart's muscle when to contract.

RRBC: I understand. When our owner works hard or exercises vigorously, the cells need more food and oxygen. They also need to get rid of their carbon dioxide waste faster than normal. So the red blood cells must move speedily and work harder to help them out.

HEART: And if our owner becomes scared, chemicals in the blood tell me that the body is in trouble, so I beat faster. I can slow the pace down also. For example if our owner falls into icy cold water I can slow down to 15 or 20 beats a minute.

I can get sick too. I probably will not have any problems when I am young, but if my owner does not take care of me now, I will be weaker when I am older. So let's hope our owner exercises regularly, and eats properly. I am a muscle, and I get stronger with training. I hope he continues to take me running, walking, swimming or biking three or four times a week. And I hope he eats well-balanced meals, and stays away from salt and animal fat and cholesterol. Heaven help us if he gets overweight or takes up smoking. The smoke from cigarettes can really kill me. No joke!

RRBC: How can animal fat and cholesterol cause problems for you, heart?

HEART: Well, you see, I am made up of cells just like every other part of the body. My cells get their oxygenated blood and nutrients delivered through two very special blood vessels, called coronary arteries. Fatty substances and cholesterol can clog up sections of these arteries, resulting in the death of the cells those portions were supposed to service. This causes pain in the heart and is called a heart attack. Sometimes people are lucky, and the rest of the heart keeps working. But the person must pay better attention to getting regular exercise and eating properly, or they may have another heart attack and die.

RRBC: Can the blood vessels in other parts of the body become clogged as well?

HEART: Unfortunately, they sometimes do clog up as well. That makes me have to work too hard all the time, and I cannot take that for very long. I am strong, but I beat more than100,000 times each day, and our owner has miles and miles of blood vessels I must push the blood through. Although there is only about 10 pints of blood circulating at any one time, every hour 100 gallons of blood is pumped through me. If some of my vessels become clogged I wear down quickly.

RRBC: How about those valves between your chambers? Do they ever malfunction?

HEART: Certainly! Sometimes children are born with valve problems. Fortunately Doctors can operate and replace a bad valve with a little machine that will do the work of a valve.

RRBC: I respectfully request that people give their hearts a break. Eat balanced meals and exercise regularly. That way you will have lots of energy and feel great for a long time. Well, my four months are about up. The bone marrow is kicking out fresh new red blood cells to replace me. Be seeing you heart - I enjoyed the times spent swishing in and out of you, and I particularly liked helping out many of the cells in our owner's body - so long!

Next tell students that they will apply the knowledge they learned from the skit in playing a red blood cell circulation game.

RED BLOOD CELL CIRCULATION GAME

Before beginning the game have students recall the path followed by Ronnie Red Blood Cell as he traveled around the circulatory system. Give each student a xeroxed copy of the heart, a penny "red blood cell" (RBC), a few red paper dot oxygen molecules (O), and a few blue paper dot carbon dioxide molecules (CO). Have students work with a partner and use these props to tell each other the story of a RBC's trip through the system. It is also possible to play the circulation game on a larger scale such as with a heart drawn on a paint tarp or asphalt surface.

To develop an understanding of what is in our blood, students will be given a recipe to follow to make pretend blood (which adventurous students are permitted to taste).

A RECIPE FOR MAKING BLOOD

All blood cells originate from a single type of cell, which divides into four main types of stem cells and then into the seven components of blood (red cells, platelets, and the five types of white cells). Share a children's book about blood cells with students before having them create pretend blood (A Drop of Blood by Paul Showers, illustrated by Don Madden and published by HarperTrophy, a Division of HarperCollins Publishers, 1967 and 1989, is recommended).

Before beginning have students pour 100 ml of water into a plastic cup, use a marker or piece of tape to mark a line calibrating their cup for 100 ml, and empty out the water. As students add the pretend "cells" to their watery "plasma" following the recipe below, have them recall what they learned about each component from reading the book.

This activity may be carried out by co-operative groups, or as a classroom demonstration as well.

55% PLASMA - Have students measure out into their calibrated plastic cup 49 ml of water, and add 6 ml of honey to it. Discuss the fact that just over half of the blood's volume is made of plasma. This pale watery fluid contains nutrients, salts, and proteins.

44% RED CELLS - Add Red Hots to the "plasma" bringing the total volume up to just under 100 ml. Trillions of Red Blood Cells move through our blood vessels delivering oxygen and taking away carbon dioxide waste. They are disc shaped, thin in the center and thick at the edges. Red Cells get their color from a protein called hemoglobin which helps them carry out their work. They live about four months.

0.5% WHITE CELLS - Add two or three popped popcorn kernels or mini marshmallows. These represent the five types of white blood cells which help defend the body from disease and toxins. White blood cells are bigger than red cells, and there is usually around 1 white blood cell for every 1,000 red blood cells when we are healthy. The white blood cells multiply as they are needed. They are able to pass through the walls of blood vessels when needed to carry out their work. Some white blood cells can wrap around a germ, engulf it and destroy it.

0.5% PLATELETS - Add a pinch of pearl tapioca, rice grains or other similar material. Platelets form in bone marrow and survive in the blood for about 10 days. They are smaller than the other blood cells, and there are almost twice as many as there are red blood cells. Platelets have no color, and are flat and round, like little plates. When you get a cut in your skin platelets gather around the cut and plug it to help stop the bleeding.

EXTENSIONS:

-Construct simple stethoscopes by attaching rubber tubing to a funnel or to the funnel shaped end of a plastic soda bottle (cut bottle into two parts to obtain the funnel). A paper towel tube can also be used as a stethoscope.

-To find out how fast your heart beats, hold a stethoscope slightly to the left of the center of your chest and count the number of heartbeats (lub-dub sounds) in 15 seconds. Multiply that number by 4 to get the number of times your heart beats per minute (for children this is usually around 100 to 200 beats a minute). Next have students run in place for four minutes. Count the number of heartbeats in 15 seconds. Multiply that number by four to find out how fast your heart is beating after running.

-Discuss the need to elevate the heart beat with aerobic exercise at least 3-5 times per week. Discuss with the students times when they get their heart pumping. Have students keep an exercise diary.

-Purchase a cow heart(s) from the butcher. Dissect the heart to find the major arteries and veins, the chambers and valves.

ADDITIONAL RESOURCES:

-Cole, Joanna. The Magic School Bus Inside the Human Body, Scholastic Inc., New York, 1989.

LESSONS TAUGHT BY THE PHYSICAL EDUCATION TEACHERS

TOPIC:Circulatory System Activity Course

GRADE LEVELS: Kindergarten to sixth

OBJECTIVES:
-To reinforce knowledge of the path of blood

MATERIALS:
Signs and pictures to designate body parts such as brain, lungs, heart, arms, legs.
Arrows to show direction of blood flow.
Scooters (One for each child)
Two sided medallions on a string. One side is red for artery, other side is blue for vein. (One for each child)
Tennis balls for oxygen. (At least one for each child)
Various pieces of exercise equipment such as dumbbells, step benches and jump ropes.

PROCEDURE:

Set up a course to represent the blood flow through the human body (from the heart, to the lungs to get oxygen, back to the heart to be pumped all around the body to deliver oxygen to different body parts and then back to the heart again). Students start at the heart on their scooter, with their medallion around their neck turned to the blue side to indicate deoxygenated blood. Students ride to the lungs to pick up oxygen (a tennis ball), and then turn the medallion to the red side to indicate oxygenated blood. Students return to the heart to be pumped to a part of the body (for example the arm). When they get to the arm students deliver the oxygen (put it in a box), so that the arm muscles can work. The student must get off the scooter and do bicep curls with a dumbbell. Now the student turns the medallion to blue and is ready to return to the heart. Once back at the heart they start over and choose a new path to another body part.

TOPIC: Skeleton Tag

GRADE LEVELS: Kindergarten to sixth

OBJECTIVES:
-To learn the names of major bones

MATERIALS:
4 cones

PROCEDURE:

Set up the 4 cones to mark a large square on a field. Tell the children the name of 4 bones and where they are located on the body, for instance skull, femur, collar bone and patella. Have the children chose one of those bones, and line up on one endline of the square. Choose a tagger to stand in the middle. The teacher calls out one of the bones, for instance "Skull". All the students who chose the skull must run across the square to the other endline. If they are tagged they must freeze on that spot. During the game, as other players run by the frozen players, they may un-freeze them by touching their "skull" or other appropriate bone.

Repeat the game with new bones and new taggers.

TOPIC: Bicycle Safety

GRADE LEVELS: First to sixth

OBJECTIVES:
-To learn the importance of bike helmets
-To learn the traffic laws and how they apply to bike riders
-To learn how to do a safety check on your bike before riding

MATERIALS:
Roller Racers, scooters, tricycles
A variety of traffic signs: Stop, Yield, One Way, etc.
Bicycle safety certificates

PROCEDURE:

The teacher sets up a course that requires students to obey traffic laws such as stop signs, traffic lights, one way streets, yield signs, etc. With the students hold a preliminary discussion on the importance of obeying traffic laws while riding a bicycle. Remind children they should bicycle with the traffic flow, always riding on the right, use a bike path whenever possible, and stop at all intersections, marked and unmarked. Always look both ways before riding into a street, use hand signals to indicate where you are turning, and never weave in and out of traffic. Next, discuss with the children how to do a safety check on the bicycle, making sure that tires have sufficient air, that the brakes work, seat is correct height with feet touching the ground when seated, and that reflectors are securely attached to bicycle. Finally, discuss the necessity for wearing a bike helmet. Helmets should fit snugly, not be so large that they cover the eyes or ears and should feel comfortable to wear. Demonstrate how to adjust straps.

Students practice riding through the course obeying safety rules.

At the end of the class students receive a bicycle safety certificate.

TOPIC: No Rest Bowling

GRADE LEVELS: Prekindergarten to sixth

OBJECTIVES:
-To increase cardiovascular fitness
-To discuss why "No Rest Bowling" is better than regular bowling

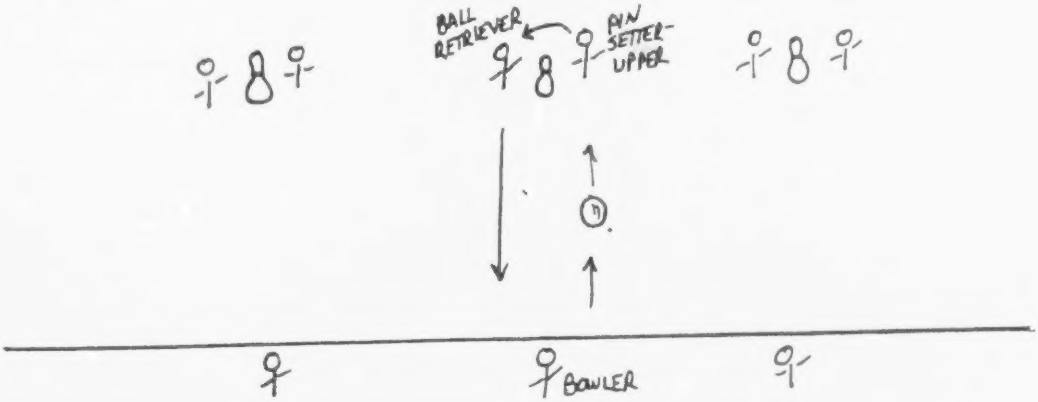
MATERIALS:
7 plastic bowling pins or other type of target
7 medium sized playground balls
7 wiffle or tennis balls

PROCEDURE:

Divide class into groups of two or three. Assign each group a pin, playground ball, and a starting position. Demonstrate how each member of a group is to rotate positions from bowler to pin setter upper and ball retriever.

On a starting signal, the first bowler for each group rolls the ball and tries to knock over the pin. If he does, the group yells "One" and rotates. If no pin is knocked down the group will still rotate positions, but not call out. Each group should keep shouting out their wins to keep track of score. At the end of 5 minutes stop and tally the class's score, by adding all the group scores together. Repeat and try to beat the old score. Repeat with a smaller ball (tennis ball) or a different target.

Figure 1



EXTENSION:

After the game discuss why "No Rest Bowling" is better exercise than regular bowling.

List some other activities that are aerobic (soccer, running, swimming), and ones that are not (jacks, marbles, computer games)

TOPIC: Pony Express

GRADE LEVELS: Prekindergarten to sixth

OBJECTIVES:
-To increase cardiovascular fitness through running sprints

MATERIALS:
4 cones
2 batons
2 physio balls

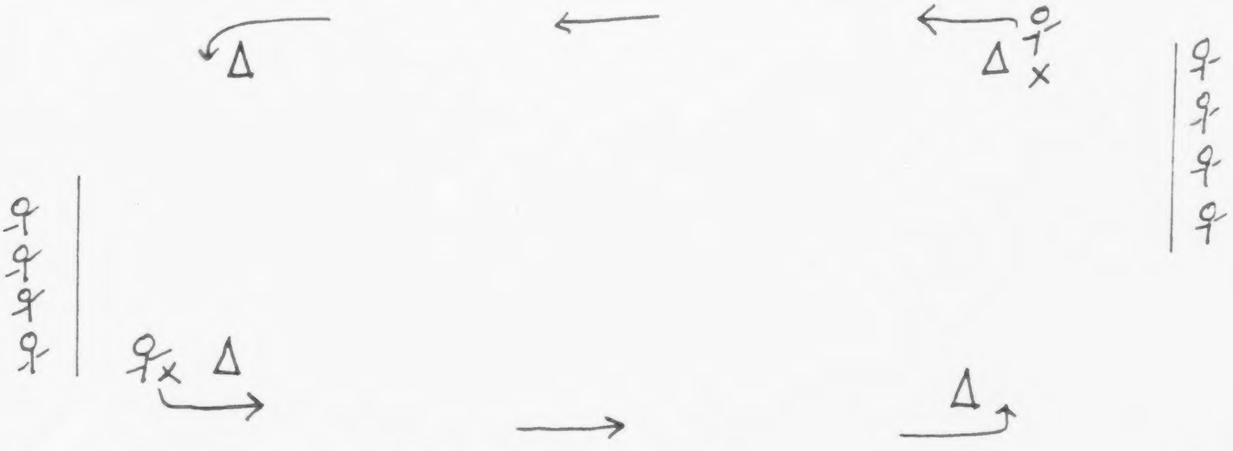
PROCEDURE:

Place cones in a large rectangle. Divide the class into 2 teams and give the first person a relay baton. The first child in line runs one lap around the track and hands the baton to the next person in line. (Instruct the children not to step onto the track to receive the baton until the runner from the other team has run by. This continues until one runner from one team catches up to the runner from the other team and tags them (this may take a while).

Variations:

Change the number of laps each runner must run.
Change the locomotor movement.
Have the runner push or carry or dribble a large physio ball around the track.

Figure 2



EXTENSIONS:

After the game discuss what the "Pony Express" was and how it was similar to a relay race.

TOPIC: Aerobic Spelling

GRADE LEVELS: First to sixth

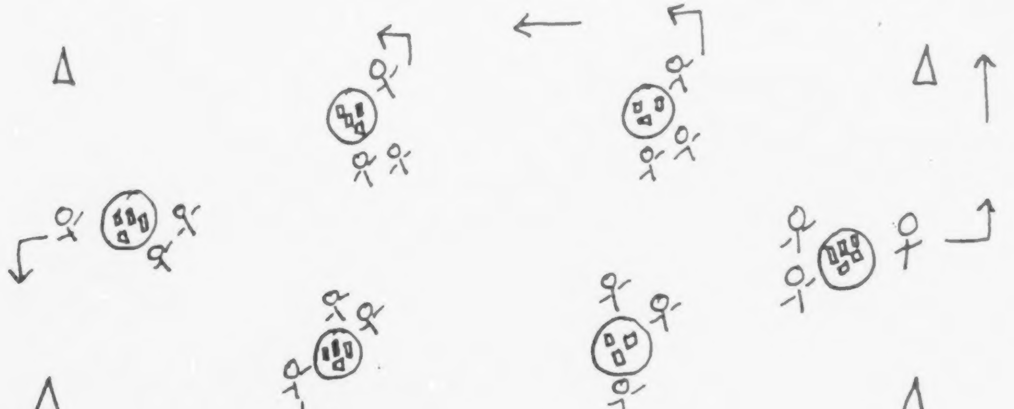
OBJECTIVES:
-To increase cardiovascular endurance
-To learn how to spell words related to health and fitness, including "aerobic"
-To integrate Physical Education with other curricular areas

MATERIALS:
4 cones
6 hoops
6 sets of index cards with letters printed on them

PROCEDURE:

On index cards print enough letters (one letter per card) to spell the words you would like to teach. (For example: exercise, nutrition, fitness, aerobic, etc.) Make six sets of letters in a variety of colors. Put out 4 cones to make a "running track". Inside the track put out 6 hoops, each with a set of cards. Divide the class into groups of 3 or 4 and assign each group to a hoop. Have each group decide on their running order. Announce the word the class is going to spell. On a signal the first person for each group will run one lap around the track and slap the next runner's hand. After running the first person will find the first letter of the word and place it outside the hoop. The second person will run a lap and then find the second letter. This continues until the word is finished. It does not matter which group finishes first, as long as the group spells the word correctly. When all groups are done, choose a new word and play again.

Figure 3



TOPIC: Crab Soccer

GRADE LEVELS: Prekindergarten to sixth

OBJECTIVES:
-To improve postural development
-To improve arm strength
-To learn to work together as a team

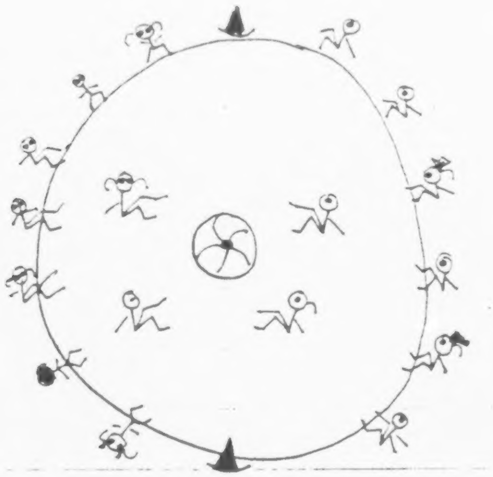
MATERIALS:
Two cones
large beach ball or cage ball

PROCEDURE:
Divide class into 2 groups. Position students on opposite halves of circle as shown in diagram A.Give each student a number.

Rules of the Game:

All players must remain in "crab position" , on all fours with back to floor, tummy facing up. When the teacher calls out a number or numbers students with those numbers enter into the center of the circle and attempt to kick the ball past the opposing team.Players may not touch the ball with their hands. A point is scored when the ball passes the opposing team.

Figure 4



TOPIC: Food Pyramid Game

GRADE LEVELS: Prekindergarten through sixth

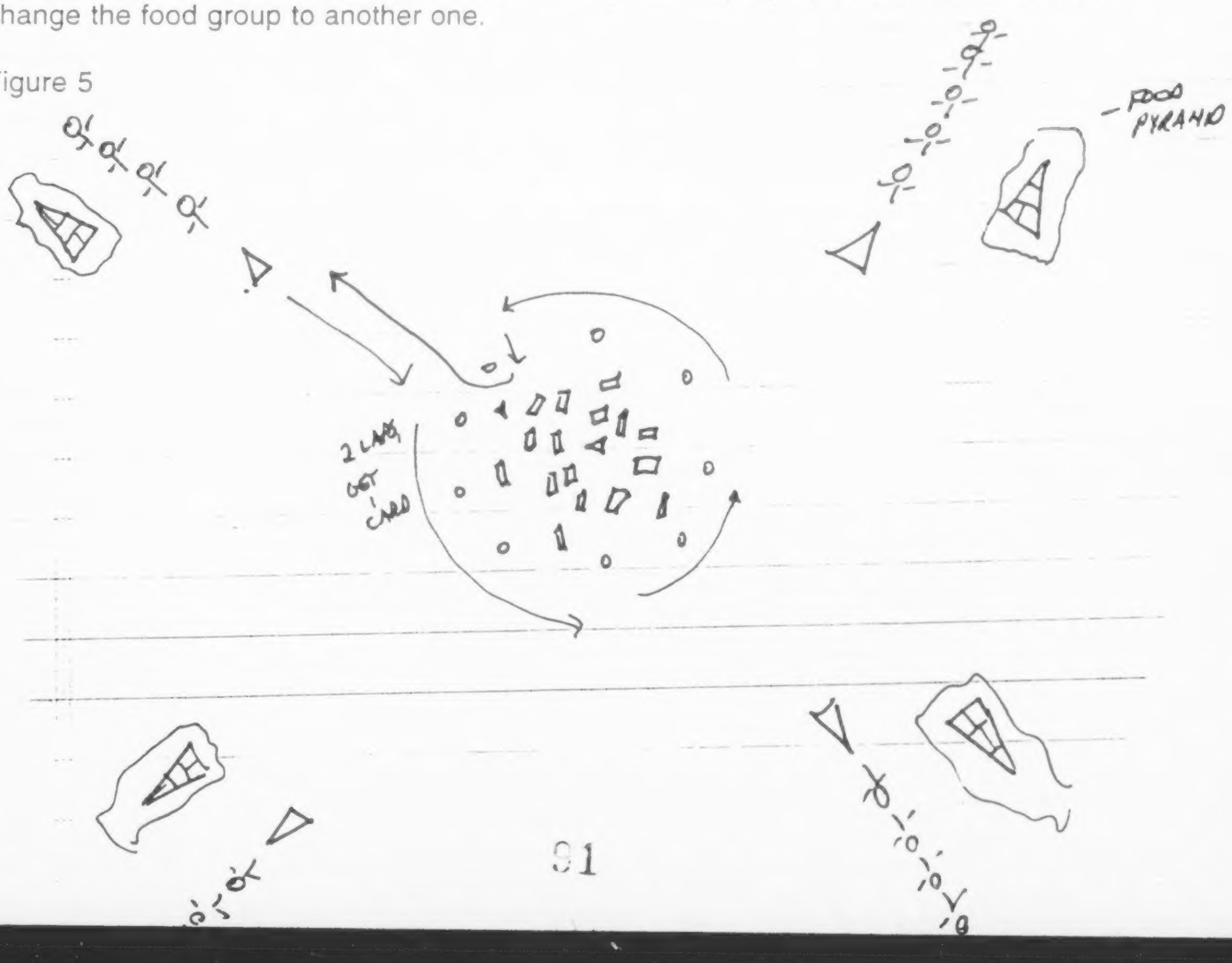
OBJECTIVES:
-To reinforce knowledge of the food pyramid

MATERIALS:
Pictures and/or names of a variety of foods from all the food groups.
8-10 rubber dots to form a large circle.
4 cones
4 food pyramids drawn on large pieces of paper

PROCEDURE:

Set up game with food pyramids in four corners, foods in the center of the room, and students broken into 4 groups around food pyramids, lined up behind cones. Teacher calls out a food group such as "fruits and vegetables". On the signal the first person in each group runs 2 laps around the circle, then enters the circle and looks for a card with a fruit or vegetable on it and returns to the group. The student places the card on the food pyramid. The second player does the same, making sure not to get the same fruit or vegetable as the first. Go through all the players on the team and then change the food group to another one.

Figure 5



TOPIC: Cholesterol and the Healthy Heart

GRADE LEVELS: Kindergarten to sixth

OBJECTIVES:
-To introduce the term cholesterol, good and bad
-To explain how bad cholesterol affects the heart and clogs the arteries, making the heart work harder
-To learn which foods contain each kind of cholesterol
-To learn that exercise can increase the good cholesterol

MATERIALS: (for 20 children)
5 large hula hoops
20 tennis balls
15 large balls

PROCEDURE:

Instruct the children that we all need some fat in our diets to keep us warm and to give us energy. But most of us eat too much fat, and fat can be converted to cholesterol which can build up in our arteries, causing our heart to have to work harder to pump blood through our arteries, and maybe even causing a heart attack. Discuss the term cholesterol, and the fact that there are two types of cholesterol, one good for your body (HDL or high density lipoprotein) and one bad (LDL or low density lipoprotein).

Introduce the Healthy Heart game. Divide class into 5 groups, with 3 or 4 students per group. Each team begins with one hoop (their heart) and 3 small balls (good cholesterol) and 3 large balls (bad cholesterol). The object of the game is to have a healthy heart with more good cholesterol than bad when the time is up. Each round of the game lasts about 4 minutes. One player from each team is allowed to go at a time. Each player may only have one ball at a time, may not guard the hoop, and must place the ball into the hoop, not roll it. The object is to take a bad cholesterol (large size ball) from the heart, carry it and put it into another heart, and bring back a good cholesterol for their teams's heart. Any team may not go to the same heart twice in a row. On the whistle students freeze, any ball they have in their hand must go to their team's hoop. Students count the balls in their hoop and decide if their heart is healthy or not.

Variations:

Each team lines us at their hoop in relay formation and takes turns like a relay race.

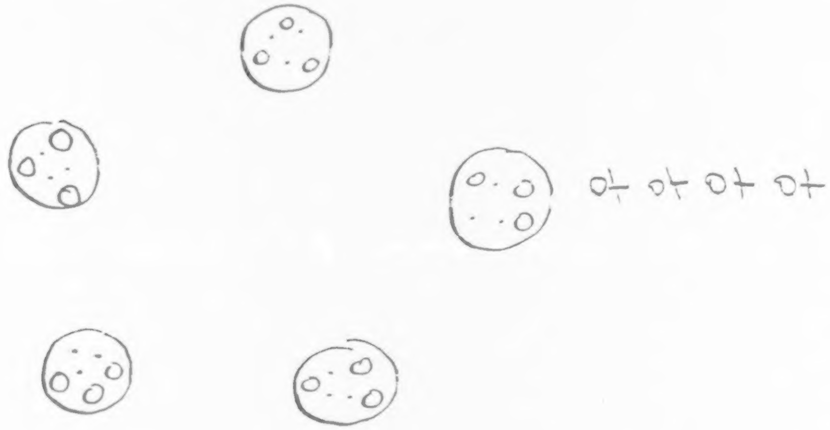
Add one tagger for each hoop. The tagger may only tag children who are carrying a ball. Tagger must keep one foot in the hoop at all times. If a student is tagged while carrying a ball they must return the ball to their team's hoop, do 10 jumping jacks and return to the game.

Have students use different locomotor movements while moving from hoop to hoop.

Conduct a follow up discussion on which foods contain good and bad fats. Only animal products contain cholesterol, but our bodies can convert fats into cholesterol. Fat that remains solid at room temperature is saturated fat, which is less good for you. Examples are butter, the fat on steak or other meats, cheese and other high fat dairy products. Fat that is liquid at room temperature, or unsaturated fat, is better for you, but the amount still needs to be less than one third of the total daily calories consumed. Examples are olive oil, corn oil, and other vegetable oils. Fried foods and salad dressings are examples of this kind of fat. Students who eat a diet low in fat and high in fruits and vegetables will in general live longer and healthier lives.

Explain that exercise can increase the good cholesterol in the blood.

Figure 6



TOPIC: Fitness stations

GRADE LEVELS: Prekindergarten to sixth

OBJECTIVES:
-To improve cardiovascular endurance and upper body strength
-To introduce the term "heart rate" and how to measure pulse
-To determine the effect of exercise on resting heart rate
-To understand the benefits of exercise

MATERIALS:
Cones, jump ropes, jump bands, step benches, hand weights, tumbling mats, stretch bands, hoppity hops, task cards, scooters, slide boards, music, pulsemeters

PROCEDURE:
Discuss with the children what the term "heart rate" means, and how we measure it. Have them first feel their pulse on their carotid artery in their neck, and then demonstrate how the pulsemeter measures the pulse and quickly determines beats per minute. Have the children measure their resting heart rate using the pulsemeters and record the number on a sticker. Collect pulsemeters.

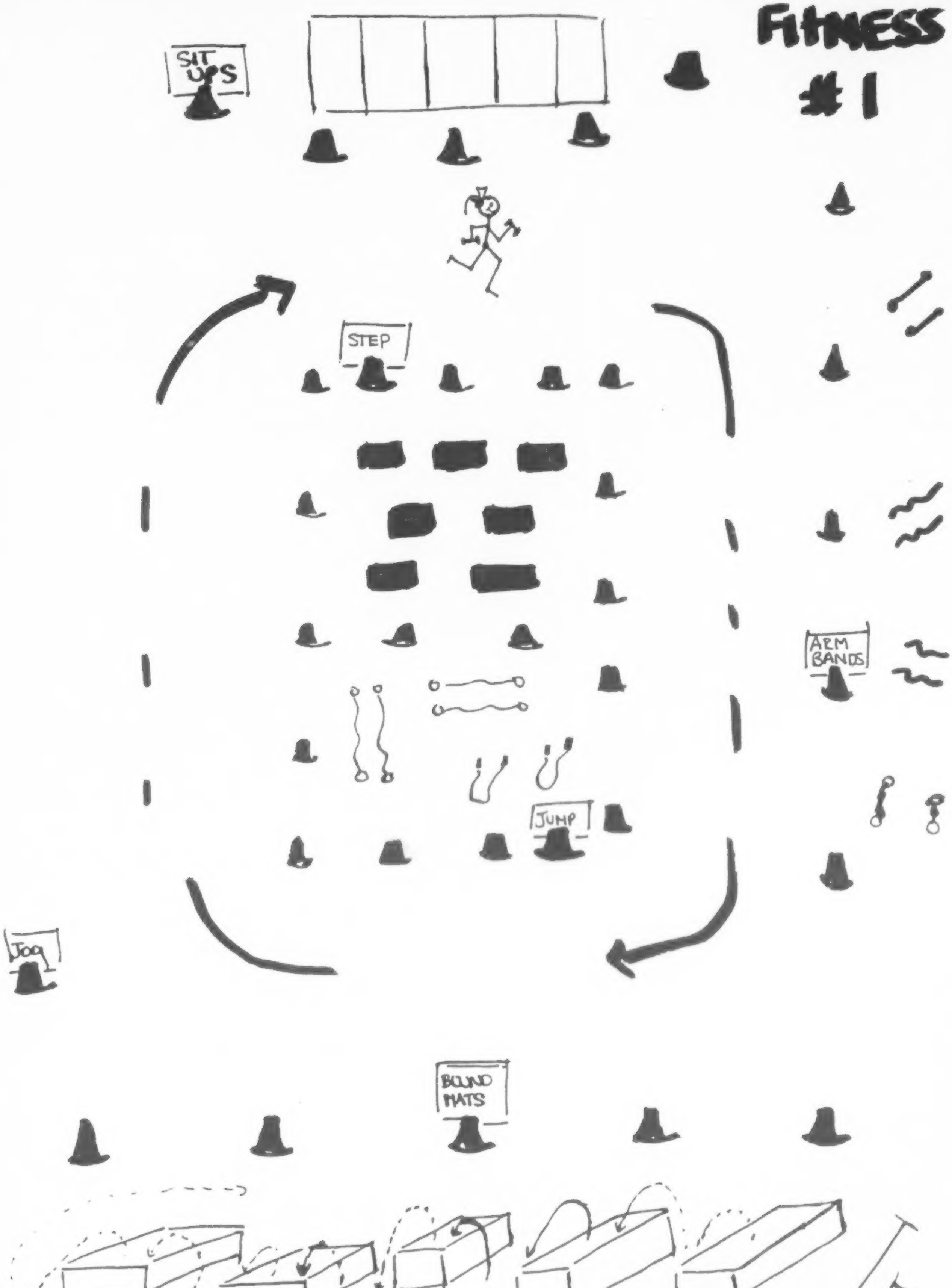
Explain each fitness station.
a. bounding mats- jump two feet up and down from mat to mat
b. jog or power walk with weights
c. jump ropes or jump bands
d. step aerobics
e. sit-up or push-up mat (demonstrate correct crunches)
f. arm bands or quick toners (demonstrate correct arm exercises)
g. scooter pull. Lay on scooter and pull body using arms only

Assign students in groups of 3 or 4 to a starting station. When the music begins students should start exercising. When the music stops students should rotate to the next station. After 4 or 5 minutes students should use pulsemeter to determine the effect of exercise on heart rate, and should record the number on their sticker.

Variations:
Use familiar toys, games and equipment so students will get a workout without even realizing it.

Create hop and jump fitness stations: instead of jogging use hoppity hops, instead of jump ropes add partner ropes and jump bands, at exercise mat have students do jumping jacks, tuck jumps, straddle jumps, etc., use hopscotch mats, use polyspots for one foot "Hop dots", and do the broad jump.

FITNESS #1


SIT UPS
STEP
ARM BANDS
JUMP
JOG
BOUND MATS
START

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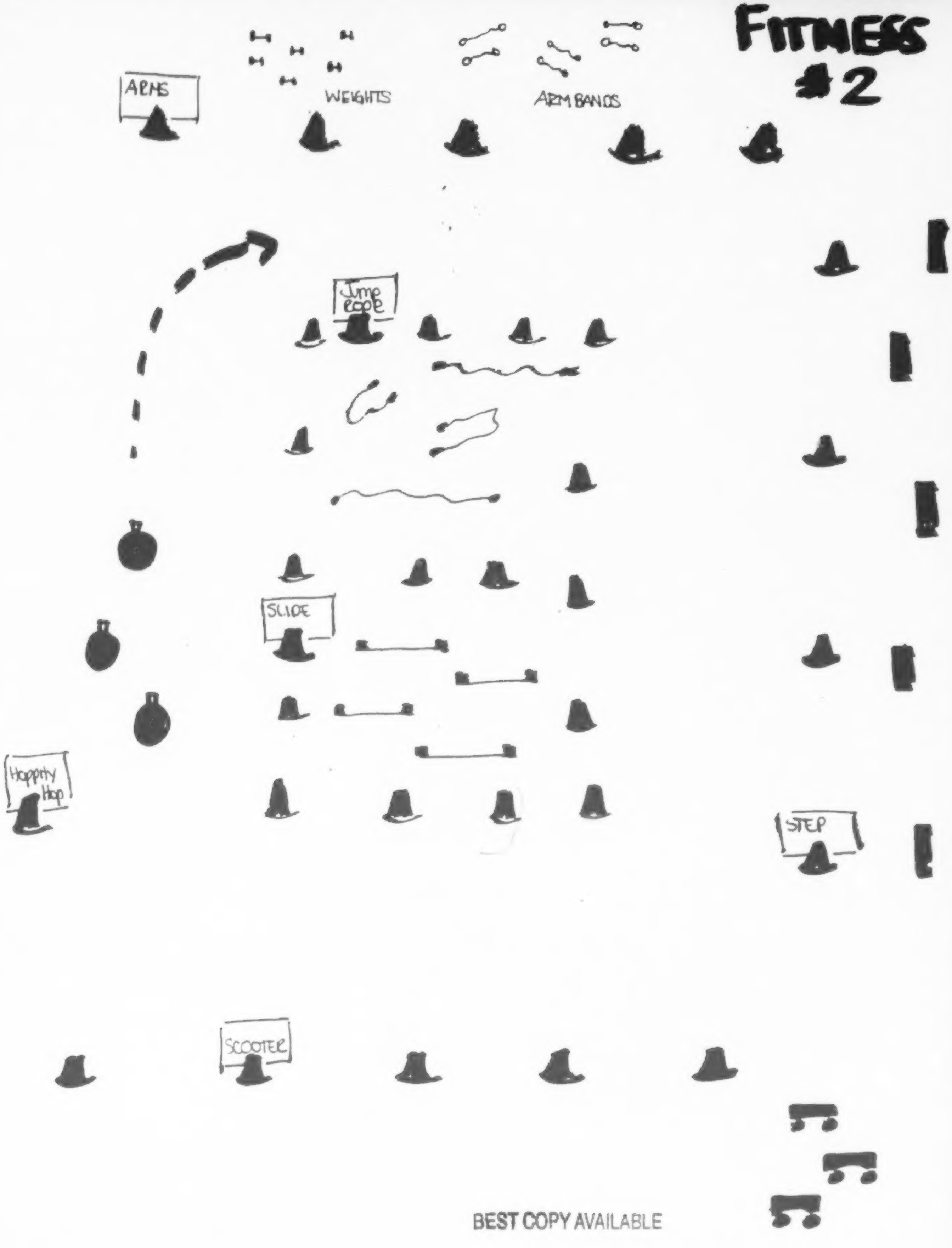
FITNESS #2


ARMS
WEIGHTS
ARM BANDS
Jump rope
SLIDE
Hoppity Hop
STEP
SCOOTER

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TOPIC: Fire Safety

GRADE LEVELS: Prekindergarten to sixth

OBJECTIVES:
-To teach important fire safety concepts such as never opening a hot door in a fire, crawling low through smoke, climbing safely and calmly down a ladder, rolling to put out a clothing fire, calling 911 and knowing their address and telephone number.

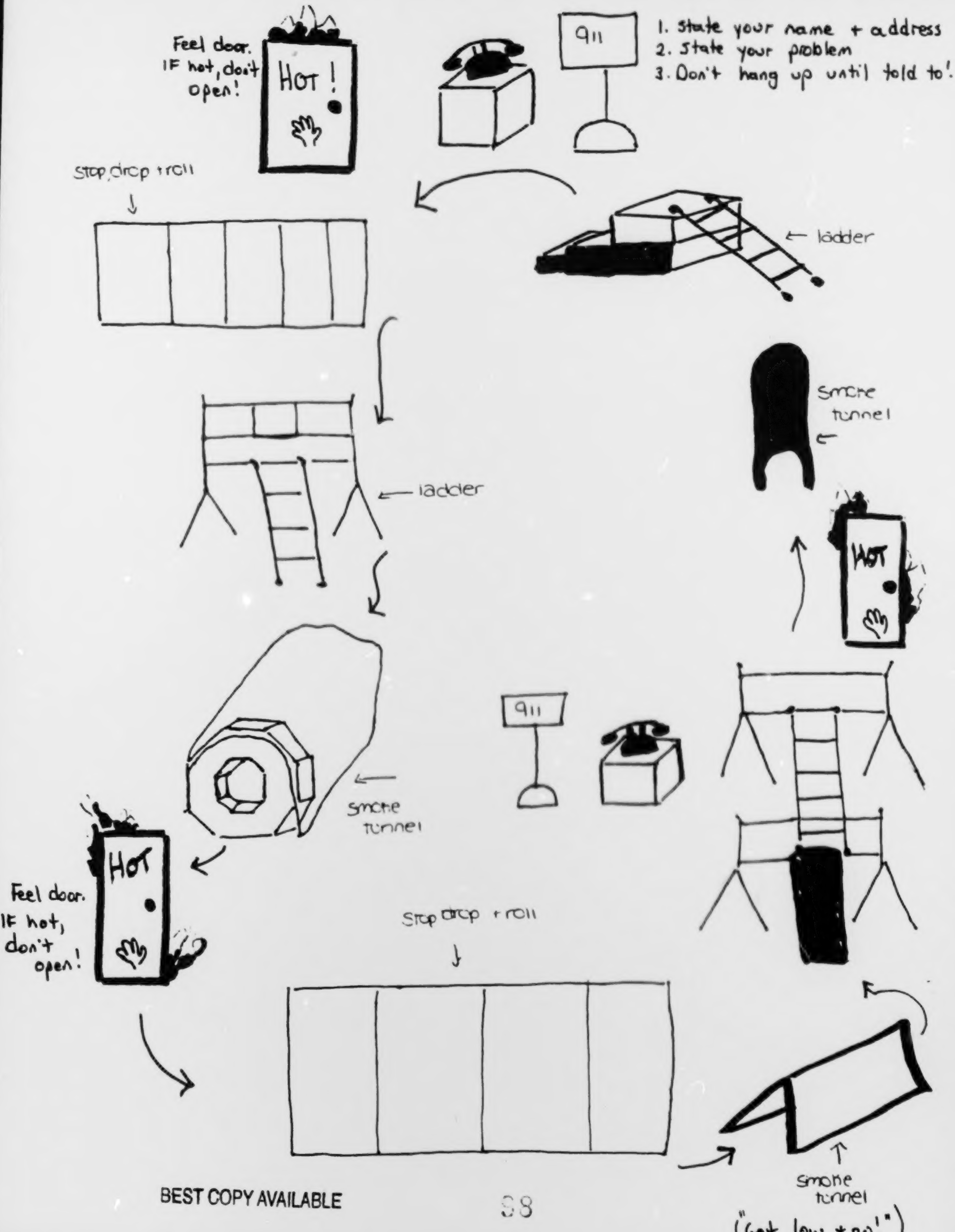
MATERIALS:
Climbing apparatus (Whittle), tunnels, parachute, old telephones, ladders, slide, tumbling mats, old or fake doors (folding mats work well), paper flames

PROCEDURE:

Discuss with the children that fires in the home are a rare occurrence, but that we should all be prepared and know what to do if there was ever a fire. This obstacle course will help teach us different things we can do to stay safe. Demonstrate if a student wakes up smelling smoke how they should first feel the door to make sure it is not hot. If not, they should keep low under smoke "get low and go" (crawl through tunnel). If their clothing catches on fire they need to "Stop, drop and roll" to smother the fire (demonstrate).Then they should carefully and calmly practice going down ladders. Remind children that it is important for every family to have a meeting place in case of a fire, and that the most important thing in the event of a fire is to get out safely. Instruct children that if they are ever home alone, or a parent is unable to use the telephone, the child must know how to dial 911 and give their address and telephone number and describe the emergency to the 911 operator. Model this for children.

After explaining and demonstrating all the stations have the children go through the fire safety obstacle course a number of times to practice.

EXTENSIONS:
-Have children go home and discuss an exit plan with their families.
-If children did not know their telephone number and address, have them learn it.


Feel door.
IF hot, don't open!
HOT!
911
stop, drop + roll
ladder
ladder
smoke tunnel
HOT
911
smoke tunnel
HOT
Feel door.
IF hot, don't open!
stop drop + roll
smoke tunnel

1. State your name + address
2. State your problem
3. Don't hang up until told to!

("Get low + go!")

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Health Related Songs written by Judy Dunham, Music Teacher

GRADE: First

TOPIC: Five Senses

"The Five Senses"

Eyes for sight
Ears for sound
Nose for smelling what's around
Mouth for tasting things you eat
Skin for feeling from head to feet

1. We have two eyes in our head
To see blue, yellow, green , and red
And when we have a light that's bright
It helps us use our sense of sight.

2. We have two ears for hearing sound
Some notes go up and others go down
Be careful loud noise can hurt our ears
and make it harder for us to hear.

3. We have two nostrils in our nose
and they're tiny hairs in both of those
They act as filters to clean the air
So smells, not dust, can get in there.

4. We use our mouth for food and drink
Taste buds are on our tongues of pink
Sweet, sour, salty, and bitter bumps
Stick out your tongue if you've seen those humps.
(stick out tongues and go "la-la-la-..." to last line's tune)

5. Hot, cold and pressure, as well as pain
Are messages of touch sent ot our brain
Tactile corpusules are in our skin
And skin helps hold our insides in!

TOPIC: Seat Belts

GRADE: First

Sung to the tune of "How Dry I Am"

Put on your seat belt
For a trip that's smooth
Before the car
Begins to move.

Your shoulder harness
Should be in place
Over the shoulder
Next to your face.

The belt that goes
Across your hips
Should be very snug
It should not slip.

Put on that belt
For a trip that's smooth
Before your car
Begins to move!

TOPIC: Fire

GRADE: Prekindergarten

Stop! Drop! and Roll!
Stop! Drop! and Roll!
It'll put the fire out cold
If you Stop! Drop! and Roll!

TOPIC: Senses/Danger

GRADE: First

What do we have to keep us out of trouble?
What tells us how, which way and what and why?
How do we know what dangers lurk around us?

It's on our five senses we can rely?

Eyes for sight, ears to hear
Nose for smelling what's far and near
Tongue for tasting and skin for touch
To our 5 senses we say "Thank you very much!"

TOPIC: Teeth

GRADE LEVEL: Prekindergarten

(To the tune "Are You Sleeping?"

Brush your teeth
Twice a day
You will feel much better
Without decay

TOPIC: Safety

GRADE LEVEL: Prekindergarten to third

Stop, Look and Listen
Before you cross the street
Stop, Look and Listen
Before you move your feet
Look: Left, Right, Left
Before you start to go
These are 3 safety rules
That (grade level or school name) children know

TOPIC: The Five Senses

GRADE LEVEL: prekindergarten

OBJECTIVE:
To expose the children to a variety of experiences with their five senses
To help children understand how their five senses alert them to danger
To learn how to protect the five senses from damage

MATERIALS:
Will vary according to the activities selected.

PROCEDURE:

Begin a discussion of each of the five senses by asking the children how that sense works. Discuss basic information such as the structure of an eyeball, or the function of different parts of the ear, using models and books as necessary. Children can use mirrors to examine their eyes, ears, tongues and noses carefully and describe what they see.

Next, focus the discussion on how that sense can alert us to different dangers (for instance, the nose can smell smoke or gas; the eyes can see signs that alert us to dangers; the ears can hear sirens, etc.

Next, discuss ways to protect that sense from damage. Consider safety and injury from a body-needs point of view. All safety rules and cautions have a scientific basis if they are sensible. Children should be helped to understand. For instance, a demonstration of how loud noises injure the ear drum may make children more likely to protect their ears. Discussion of how flying particles may injure and eye, and the fact that we cannot regenerate eye tissue, may make children more likely to wear eye protection when necessary, not just when demanded at school.

Finally, explore each sense with as many different experiences as possible. Possibilities include:

Sight
-Bring in a variety of objects to look through such as a kaleidoscope, binoculars, colored cellophane, sunglasses, paper towel tubes and magnifying glass. Find a spot in the room to look at, and alternate looking at it through the different objects. How do things look when you look through something?
-Examine the children's eyes using an eye chart or make your own using magazine pictures or computer clip art. Explain that the shape of our eyeball determines how we see things. Some people wear glasses to correct vision problems.
-Add eye chart and glass frames to dramatic play
-Take a “blind walk” where children close their eyes to experience what it would be like without their eyes
-Show an example of Braille and discuss canes, seeing eye dogs etc.
-If possible have a blind person visit the class and discuss some of their challenges

and some of their favorite experiences
-Discuss eye care, having eye exams and keeping objects and substances that can damage eyes away from them.
-Play What's Missing? Display familiar objects on a tray. Cover items with a cloth and ask children to close their eyes. Remove an item as their eyes are closed. Can they guess what's missing? Try removing more than one article at a time to make it more difficult. Try playing Who's Missing by removing a child instead of an item.
-Graph eye colors or create an experience chart including three columns-one for each child's name, one for eye color, and one for something in the room that is the same color as his or her eyes. Does eye color affect the way you see something? (Does everyone see a red apple as red regardless of their eye color?)
-Play "I Spy" riddles with students. Empty paper towel rolls make great spy glasses.
-Have children draw a picture of what they like to see
-Darken the room and have the children try to identify various objects. They should appreciate that it is impossible to see without light. Next, shine a flashlight beam on the various objects. Can the children identify them now? Finally try the same experiment with all lights on and blinds open. Is this easier to see?

Sound
-Discuss ear care and safety, including avoiding loud sounds, never putting sharp objects in the ear, prompt medical treatment of ear infections, regular testing of hearing, and wearing appropriate clothing in wind and cold.
-Make pairs of sound cans from film containers containing different objects such as marbles, sand, rice, pebbles, etc. Let the children match up the pairs that make the same sound.
-Bring a variety of objects to circle time that make a sound (horn, alarm clock, bell etc.) Show the children the objects and let them hear the sounds. Now children turn their backs. Sound one object at a time. Can they guess the object? Next have the children close their eyes while one of the children hides in the room and makes a sound with one of the objects. Can the children listen and point where the child making the noise is hiding?
-Let children take turns making different sounds in the classroom while others try to guess the source. They might push a chair, turn on water, close a door etc.
-Discuss how a deaf person can function in a hearing world by using hearing aids or learn sign language..
-Invite a guest speaker in to teach the class some sign language.
-Ask the children to bring in something from home that makes a sound they like
-Play a clapping and tapping game. Clap loudly and then softly. Which child can clap the softest. Stamp feet loudly and softly. Which child can stamp the loudest? Do the same with musical instruments.
-Make a bingo game using sounds and a sound tape
-Listen, watch and feel the vibrations from walls, drums, strings on piano or guitar and other instruments
-Try making echoes off of different surfaces

Taste

-Make a graph of favorite foods the children like to taste grouped according to the four tastes of sweet, sour, salty and bitter

-Have a tasting party. The same items do not always taste the same: apples may be sweet or sour, gum comes in many different flavors. Different items may have the same taste: lemon-flavored items like ice cream, cookies, pudding. Items that look alike do not always taste the same: salt and sugar, flour and powdered sugar, apples and pears, cinnamon, nutmeg and cloves.

-One food can be the basis of many food products. Have an apple taste test by sampling products made from apples. Use applesauce, raw apple, apple jelly, dried apples, apple juice, apple chips, etc. What food did each child like best? Make a graph of the results.

-Distribute Mr. Yuk stickers (with directions to parents) after explaining to children to never taste an item with a Mr. Yuk sticker on it. Remind children to always check with a grown up before taste testing.

Touch

-Have children use a magnifying glass to examine their skin. Even the parts of the skin that seem smooth and unwrinkled have tiny ridges and holes visible with magnification.

-Have children share their favorite things to feel.Try this simple song sung to Row, Row, Row Your Boat.

Touch, touch your shoe,
Touch it one, two, three
Is it hard or is it soft?
Can you tell me?

(Try additional verses for hair, rug, floor, etc.)

-Have children take off their shoes and socks and feel things with their feet. Can they use words to describe how they feel? Which things tickle?

-Brainstorm an experience chart of “touch” or “texture” words. What words would you use if you put your hands on an ice cube, mud, pine cone, etc.?

-Set out two different pieces of paper to be used for sorting. Place a hard object on one and a soft object on another. Remove an object from the mystery bag and place the object on the paper that describes it.

-Sort objects by texture, such as hard, soft, rough, smooth, slippery, prickly, sticky,fuzzy, gritty etc.

-Place objects of various textures in a bag or box with hand sized hole cut in it. Let the children take turns reaching in the bag or box and guess the identity of the object. Repeat activity using objects found by the children on the playground.

-Take a texture rubbing walk. Give each child a paper and peeled crayon. Walk around the building looking for good textures (raised letter signs, bricks, stair treads, etc.) An alternative is walking outdoors for man-made and natural textures

-Using magazine pictures have children create collages of things that are pleasant to touch, and things that are dangerous or unpleasant to touch.

-Tell the story of King Midas, and discuss the "Midas" touch.

Smell

-Soak cotton balls with unique fragrances (for example, peppermint, peanut butter, lemon, orange, vinegar, coffee, cinnamon and perfume). Place cotton balls in the bottom of film canisters. Put the lids on and poke holes in lids using a safety pin. Let the children take turns smelling the cans and identifying the items, or have then match them to pictures of the items with the fragrances, or make two of each scent and have the children match. Like items do not always smell the same: flowers, perfumes, etc. Different items may have the same smell: lemon scented lotions, shampoo etc.

-Items that look alike do not always have the same smell. Lay a variety of pairs of items that look alike but do not smell the same on a tray (potato flakes and soap flakes, strawberry gelatin and cherry gelatin, root beer extract and vanilla extract, glass of water, glass of vinegar) Have the children describe what is the same and what is different about each pair of substances. Are there any that have no smell?

-Take a nose walk. Ask children to be "nose detectives" as they walk around inside or outside the school. Stop periodically to smell the air. What can our nose tell us?

-What's for snack? Use fragrant foods such as oranges, fresh popcorn, gingerbread. etc. Place in a bag and ask the children to guess what is for snack.

-Brainstorm with the children their favorite or most pleasant smells, and their least favorite or unpleasant smells.

-Demonstrate the interrelationship of taste and smell. Have the children, with eyes closed taste a piece of apple while you hold an onion under their nose. Have them guess what they are tasting?

TOPIC: The Food Pyramid

GRADE LEVEL: Kindergarten

OBJECTIVES:
To introduce and discuss the food pyramid
To explore the nutritional value within each food group category
To learn the importance of a healthy diet to good health as a life long goal
To plan a food menu for one week using the five food group categories

MATERIALS:
Food pyramid chart
Food magazines to use as cut-outs to design a classroom food pyramid
Posterboard or large pieces of paper

PROCEDURE:

Begin with a class discussion on nutritious foods to eat. Accept all reasonable responses and record children's answers on a large chart. Review the food pyramid chart asking questions about the different food groups. Ask the children why we need these foods for our body. Briefly review the importance of each food group and how it helps us to maintain a healthy body.

Have children participate in creating a large food pyramid on posterboard or large paper. Ask the children to name their favorite foods. Next, have children name various foods that fall under the different food categories: fats and sweets, milk, meat, vegetables, fruit and bread groups. The children will work in groups of 5 to6 cutting out pictures in magazines that fall under the food categories. Come back together as a group to discuss the collected pictures and paste them onto the chart. Display the large pyramid in the classroom.

EXTENSIONS:
-Set up a dramatic play center with different play foods--children can act out a cafeteria menu serving their customers. Also, shopping bags can be labelled with different parts of the food pyramid, and children can classify the foods into the correct bag.
-Send a note home with children asking each person to bring in one favorite food from a different section of the food pyramid each day, and have a tasting session. Create graphs of favorite foods.
-Conduct an in depth exploration of one particular food group. For instance a study of bread around the world offers many opportunities for lessons in nutrition, social studies, math, science and language arts. Another possibility would be looking at different cheeses around the world.
-Have a cooking lesson each week, cooking one food from each category on the pyramid. Discuss the importance of measuring all ingredients when cooking, and try some experiments with measuring different quantitites of key ingredients. Do the results taste the same?

-Have children also plan their own favorite menu at home including the foods from all the food groups.
-Study how different foods are grown and where.
-Create a classroom cookbook with favorite recipes of the children
-Have students keep a food journal, recording what they eat and where it fits on the food pyramid.
-Encourage families to have children be involved in making family meals.
-Have a field trip to a grocery store to learn how supermarkets keep their foods fresh.
-Try retelling the story of the "Very Hungry Caterpillar" with the caterpillar eating foods from the different food groups each day of the week. For instance, he could begin by eating one slice of chocolate cake on Monday, two pieces of cheese on Tuesday, three types of meat on Wednesday, etc. The children can illustrate the foods and the caterpillar to make a wonderful mural.
-Create a puzzle of the food pyramid with each section being one piece. Paste the pyramid onto cardboard and cut out. Each child can create their own smaller puzzle with a copy pasted on to shirt cardboard. Children can draw or color in food drawings in the different sections.

TOPIC: Safety when crossing streets

GRADE LEVEL: First

OBJECTIVES:

To discuss how to cross streets safely by paying attention to traffic signals

To match words red, yellow and green with corresponding colors and meanings on a traffic light

MATERIALS:

9 wooden blocks, red, yellow and green construction paper, white paper for signs, markers

PROCEDURE:

Tape onto three different blocks a piece of construction paper of each color. On another three blocks tape the words RED, YELLOW, GREEN. On the last three blocks tape the words STOP, BE CAREFUL, GO.

Set the blocks in three distinct rows by color, word and meaning in front of the class. Ask the children if they have seen this color on a traffic light or stop sign and ask what it means. Discuss with the class how the color red, the word RED, and STOP are related. Have a similar discussion for the three yellow signs and then green.

Rotate the blocks so that they no longer are in rows by color and meaning. Invite a volunteer to match them for the class. Repeat several times.

Have students role play crossing the street at a crosswalk where these colors would appear. Instruct them to show you what they would do on a red, yellow or green light when crossing.

EXTENSIONS:

-Take the class for a walk near the school. Point out traffic lights, "walk" and "don't walk" signs, stop signs and other traffic signals. Discuss the meanings of each sign.

TOPIC: Safety Riddles

GRADE LEVEL: First

OBJECTIVES:
To reinforce important fire, car and water safety rules

MATERIALS:
Cards with a series of safety riddles written on front, answers on back.

PROCEDURE:

Use circle time to practice problem-solving skills. Ask for responses to the following riddles. Remind the children to listen to the entire clue before they make a guess.

(Riddles adapted from *Safety*, Frank Schaffer Publications, Inc. Torrance, CA., 1994)

1. I keep you safe when you are riding in a car. (seat belt)
2. When I am red, cars stop. When I am yellow cars go slowly. When I am green, cars go. (traffic light)
3. I'm bright and shiny. Carrying hoses, ladders and firefighters, I can't be missed. (fire truck)
4. I am on the ceiling of your house. If I sense smoke I make a really loud noise! (smoke detector)
5. If there is an emergency, remember to call these numbers. Help will be sent as quick as can be. (9-1-1)
6. On my motorcycle or my horse, in my car or on the street, I can protect you if trouble comes your way. (police officer)
7. A mask, a helmet, a raincoat and boots all help me to do my work. (firefighter)
8. If I am someone you have never met, do not go with me, no matter what I say. (stranger)
9. Put me on before you go boating. (life jacket).
10. Drivers stop their cars when they see my red sign. (stop sign)

EXTENSIONS:
-Have children work in partners to create a painted representation of one of the riddle answers. Display the paintings and riddles in a mixed up order on a bulletin board. Attach a small piece of velcro tape to each picture. Attach yarn that has velcro on the loose end to each riddle for students to match to the appropriate picture.

TOPIC: Safety

GRADE LEVEL: First

OBJECTIVES:
To reinforce important fire, car and water safety rules

MATERIALS:
Two pictures or puppets of a "foolish" and "wise" character.

PROCEDURE:
Describe two characters, one foolish and one wise. Discuss the meanings of the words with students. Use puppets or pictures to represent the foolish and wise characters, and have the children guess which character would say the following things:

"When you are in a car, jump around and bother the driver"
" Talk to your friend during a fire drill"
"Don't play with matches"
"Take medicines or vitamins that are not your own"
"You may swim, even if there is no lifeguard on duty"
"Check the batteries on your smoke detector once a month"
"Stay in the pool during a thunderstorm"
"Don't play with cleaning products or other chemicals you find at home"
"If a stranger approaches you in a car, run away"
"Wait until the person ahead of you has finished using the slide before you begin"
"Do not run between parked cars"
"Stay away from gasoline stored in the garage"

EXTENSIONS:
-Children can create their own foolish and wise character puppets from popsicle sticks, yarn, felt, etc. Create "sentence bubbles" as used in cartoon strips, and have the children choose an appropriate sentence for their stick puppets to say. Create a display from the puppets and sayings.
-Role play with the class appropriate safety behavior in various settings. For instance, take an imaginary trip to the swimming pool. Brainstorm with the class a list of things they need for swimming (goggles, sun block, hat, sunglasses, pool shoes, etc.) Have the children pantomime packing their pool bag, walking to the car, opening the door and sitting in the car. Drive to the pool, and when the car is parked get out of the car, watching carefully for cars in the parking lot. At the pool check that for rules about jumping and diving, look for other swimmers nearby and get in the water. Pantomime a swim. All the way through this exercise ask the children questions about possible safety hazards, like "should we take off our seat belts while driving? Should we run after a ball in the parking lot? Should we dunk our friends in the pool?"

TOPIC: Safety Indoors

GRADE LEVEL: First

OBJECTIVES:
To discuss prevention of accidents
To review basic safety rules concerning poisons, fire and home safety

MATERIALS:
Crayons, markers or paints, white drawing paper, white yarn or crepe paper, blue bulletin board paper

PROCEDURE:

Ask the children what they know about spider webs. Draw or show a picture of a web to the class. Explain that spiders spin webs to trap insects to eat. Smart insects stay away! Tell the class that they will help warn each other and other students about dangers in their homes, and at school by painting or drawing a picture of dangerous things they should avoid, and ways they can get hurt.

Brainstorm a list of dangers and hazards with the children. (Examples: running in hallways, carrying scissors and pencils in unsafe manner, tipping back in chairs, putting skates, backpacks, and books on stairs, dangerous materials in accessible places for small children such as matches, medicines, cleaning fluids, perfumes, etc., trash near heaters, fireplace without screen, etc.)

Have the children choose a danger to illustrate. Create a large web on the wall, and place the pictures within the web.

Discuss with the children why some dangers might seem inviting. Discuss ways the children might avoid or protect themselves from such dangers.

TOPIC: Safety Sign Bingo

GRADE LEVEL: First

OBJECTIVES:
To learn to recognize and understand the meaning of important safety signs

MATERIALS:
Copies of safety signs for each student, shirt cardboard or other stiff paper for game board marked into a grid shape, beans or tokens for markers.

PROCEDURE:

Begin by reading to the class a book on safety signs. Safety City (Kidsbooks Inc. Chicago, IL, 1997) is a good choice. Discuss the different signs and their meanings. Have children identify a way to remember the meaning of different symbols such as the "H" for hospital, or person walking sign for permission to cross a street, the X for railroad crossing, etc.

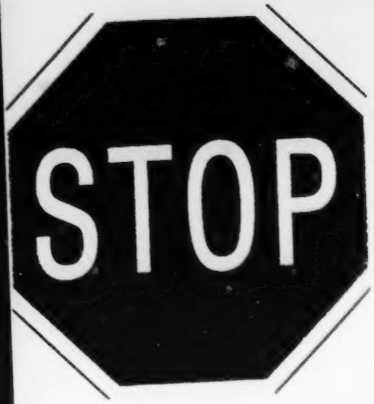
Distribute copies of pages of safety sign pages. Have the children cut out each sign and then paste in whatever order they desire onto their grid. The caller cuts the signs up also, but puts them into a basket.

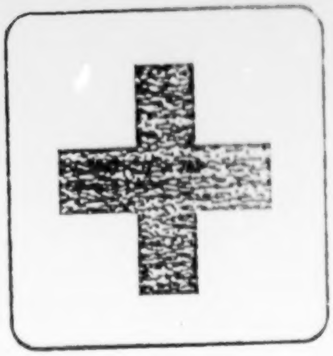
For the first round of play the caller says the name, and shows the sign. Children should cover the sign on their game board with a marker. The first child to get a row of markers (horizontal, vertical or diagonal) is the winner.

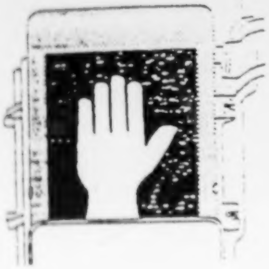
For the next round of the game the caller only says the name of the sign, but does not show it's picture.

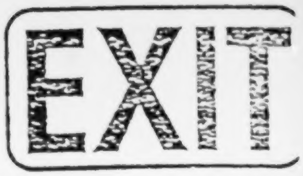
For readers, a third round could be played showing the written word to the students.

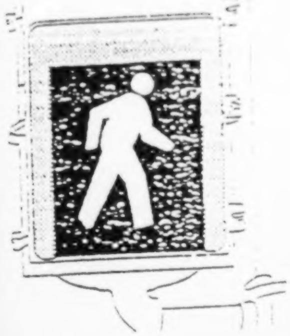
EXTENSIONS:
-Use the same safety signs to play concentration or to make a memory matching game.

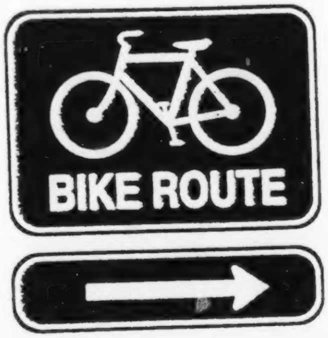


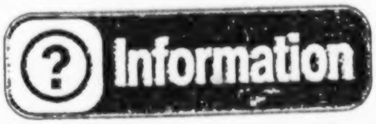








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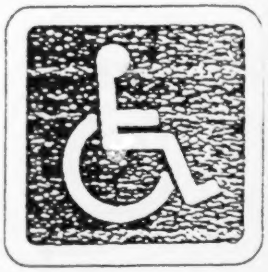

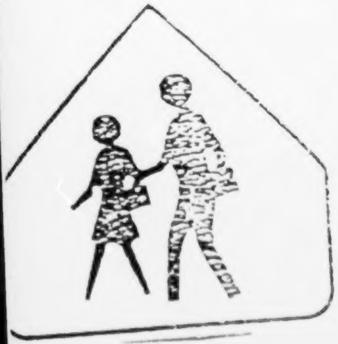

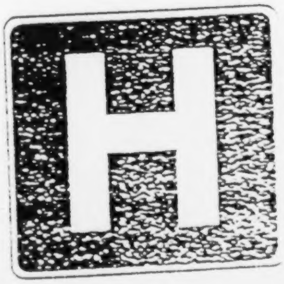

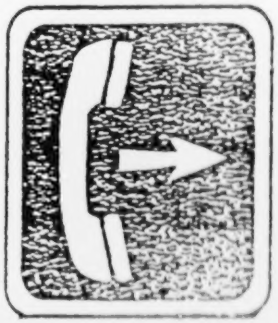

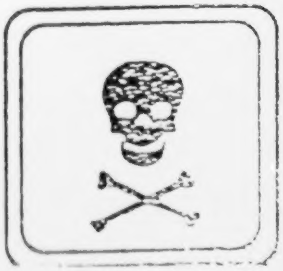

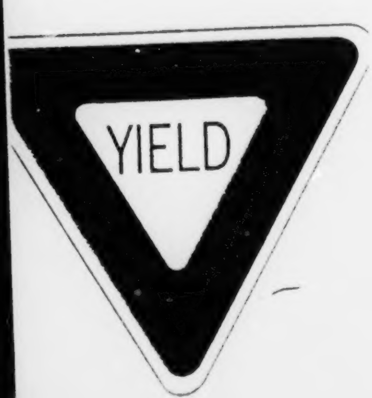

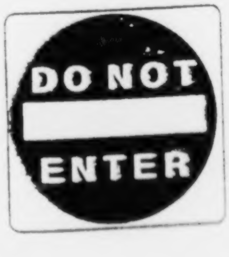
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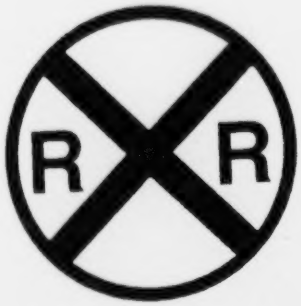

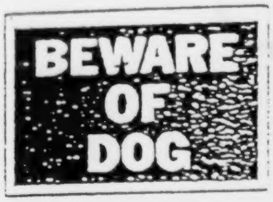
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TOPIC: Lightning Safety

GRADE LEVEL: First

OBJECTIVES:
To learn basic safety procedures during a lightning storm

MATERIALS:
poster paper and marker for recording rules

PROCEDURE:

The teacher should know that every year lightning kills about 100 people, and injures more than 300 others, more than any other weather hazard including blizzards, hurricanes, floods, tornadoes, earthquakes and volcanic eruptions. Lightning is caused by an electrical charge building up in a cloud. The cloud develops a negative charge, the ground a positive charge. Lightning can travel at 300 miles per second and carry up to 50 million volts of electricity. Anything tall-a tree, a tower, a person-can become a path for the electricity.

The best defense against lightning injury is to plan ahead. Don't let yourself be caught by surprise. If you are going out hiking or boating and you think there is any chance of lightning danger plan where you could find safety.

Have children brainstorm ways to be safe if a thunder and lightning storm threatens. After creating a list ask the children to determine if the following rules are true or false. (All answers are true)

During a lightning storm:
1. Stay away from railroad tracks.
2. Find a flat field to lie down in, if you cannot get inside a building or car.
3. Stay away from fences.
4. Find a ditch to hide in.
5. If you are in a car, stay in the car.
6. Stay away from water.
7. Try to find a large group of trees about the same height if you are in the woods.
8. Stay away from hilltops.
9. Try to be the shortest thing around.
10. Stay away from metal objects.
11. Stay away from single trees.
12. If you are indoors, stay indoors.
13. Do not use electrical appliances, including computers, TV's and CD players.
14. Use the telephone only for an emergency.

TOPIC: Safety Rule Big Book

GRADE LEVEL: First

OBJECTIVES:
To reinforce all safety rules taught in this unit

MATERIALS:
Large sheets of white paper for each child, markers.

PROCEDURE:
Review the different areas of safety discussed over the last few weeks (car and pedestrian safety, fire safety and safety from indoor and outdoor hazards). Have children brainstorm a list of safety rules beginning with each letter of the alphabet (for example: O-Obey all traffic signals, W-Walk on the sidewalk. If there is not one walk on the side of the street facing on-coming traffic).

Write each rule onto a sheet of paper. Each child chooses a letter to illustrate. Bind the finished illustrations into a class big book to share with other classes.

EXTENSIONS:
-Use a computer program to create a slide show of safety rules.

TOPIC: Playground Safety

GRADE LEVEL: Second (Best done at the beginning of the school year)

OBJECTIVE:
To explore and discuss ways to play and to use the equipment in order to prevent accidents on the playground.

MATERIALS:
Poster boards
Markers
large chart paper

PROCEDURE:
Grade level teachers should first meet to come up with a common list of the important rules of safety on the playground. Begin class with students by touring the playground by areas and carrying out guided discoveries (adapted from Charney, The Responsive Classroom) about the equipment and boundaries. For instance ask, " what is this? what do you notice about it's shape? how might it be used?" Ask students to suggest the necessary behavior to keep in mind when using particular pieces of equipment. Ask students to demonstrate proper use of equipment after ideas have been discussed as a class. Allow time for each of the students to practice the appropriate behavior after ideas have been discussed.

In individual classrooms teachers elicit ideas from the students about rules for safely playing on the playground based on previous year's experience. Record all reasonable ideas on large chart paper. If any necessary rules are omitted by the class the teacher should help them brainstorm ideas by providing scenarios which would require such a rule to be utilized.

Assign partners to the children. Have each pair choose a different safety rule about the playground. Have them design a poster including an illustration and the rule. Remember to have them phrase the rule in positive language. For example, "Remember to walk when playing on the Big Toy," rather than saying "Don't run on the Big Toy." Post signs in visible places around the school. Alternatively each pair of students could make an 8 1/2 x 11 inch sign that could be complied into a classroom safety book. These classroom books could then be shared with younger children in the school.

EXTENSIONS:
-Discuss basic first aid if an accident should occur (tell an adult, wash minor cuts, etc)
-Give the children disposable cameras to take photographs of classmates following rules while playing on the playground.
-Create a bulletin board of safety rules.
-Children can present their poster and recite the poem "Safety First" at a beginning of the year grade-wide Community Meeting during the first few weeks of school.

ADDITIONAL RESOURCES

Charney, Ruth Sidney, Marlynn K. Clayton, Chip Wood. The Responsive Classroom, Greenfield, MA:The Northeast Foundation for Children, 1995.

TOPIC: Dental Hygiene

GRADE LEVEL: Second

OBJECTIVE:
To learn correct dental hygiene
To become more aware of the effect acid has on teeth

MATERIALS:
graph paper
writing journals for recording observations
8 hard boiled eggs
2 12 oz. plastic cups
4 cans of soda
1 bottle of vinegar
4 tubes of fluoride toothpaste
10 old toothbrushes

PROCEDURE:

Discuss as a class what students know about taking care of their teeth. What do they do to clean their teeth? What products do they use to help take care of teeth? (Toothpaste, toothbrushes, dental floss, etc.) Remind children that they should be brushing for several minutes twice a day, that an up and down motion is better than across, and that they should floss between teeth.

Discuss what types of food can be bad for teeth? Have the children make a list of foods they think are bad for teeth, then discuss that any food that leaves your mouth feeling slick is good for teeth, whereas any food that is sticky and sweet can remain on the teeth where it will be fed on by bacteria in the mouth and turned into acid. It is this acid which eats through the teeth and causes decay. Foods that are good for the teeth are almost all raw fruits and vegetables. Bad foods for teeth are dried fruits and vegetables, chewing gum, sweet drinks like soda and sweetened fruit drinks, and bread and pasta. Sticky candies are very bad for teeth, if students want a sweet treat a hard candy is better.

Demonstrate what happens to your teeth when you drink a liquid containing sugar such as soda by placing 4 hard boiled eggs into 4 separate plastic cups full of cola for 24 hours.The eggs become discolored from the sugar and coloring.
The next day remove the eggs from the cups of cola. Ask children to think about what caused the eggs to change color.

Have the children work in groups of 5 using toothpaste and toothbrushes to get the egg to turn white again. They should take turns brushing the egg. Have students record what they observed about using toothpaste on an eggshell does to the egg's shell (which is similar to the enamel on your teeth.) Remind the children that when they are brushing their own teeth they should use a pea sized dollop of toothpaste and always spit it out, never swallow it.

Put 4 eggs into 4 cups full of white vinegar. Observe changes in the shell over several days. Ask the chidlren if they can figure out what causes the egg to get soft? (The calcium in the shell is being dissolved away by the acid vinegar). Discuss with the children that this is similar to what happens to teeth that are eaten away by acid. Plaque is the sticky, colorless buildup of food residue, saliva and bacteria that forms on teeth. The bacteria found in plaque form acids. Acid on the teeth is the cause of toot decay. We can prevent the buildup of plaque by frequent brushing, especially after the bad tooth foods listed.

Extensions:
-Ask children to survey a classroom in the school to find out the different types of toothpaste children use.
-Do a survey to find out which toothpaste children think tastes the best.
-Do a survey to find out how many times a day children brush their teeth.
Have children display their results using graph paper.
- Many toothpastes have fluoride in them. What is fluoride? How does it help your teeth? Ask students to try and find out more about fluoride.
-Visit a dentist's office on a field trip, or have one come to class. Find out what a dentist uses to clean teeth.

TOPIC: Fire Safety

GRADE LEVELS: First and Third

OBJECTIVES:
-To have children understand that fires can be prevented by inspecting for fire safety issues
-To prepare children to deal with a fire emergency

MATERIALS:
"The Smoke Detectives" video (Obtainable free of charge from State Farm Insurance Co., One State Farm Plaza, Bloomington, IL 61710-0001)

PROCEDURE:

Screen the video to first and third grade" buddies" (children who are paired for reading partners and for other events). October is fire safety month and is a good time of year for this activity.

After viewing the video the following activities may be conducted over a period of five or six classes.

First, have the children discuss important lessons learned from the video. Have students create a fire safety checklist for their school. (Should include items such as clearly marked exits, fire exit plans posted in visible places, no flammable liquids or other dangerouse substances stored, etc.) Make copies of the checklist and have the buddies go around the school to determine how "fire safe" the school is, checking off items on the checklist, and noting any problems. Compare results of the different teams when all return to the classroom. If safety issues are discovered they should be reported to the appropriate authorities for remediation.

Next, have the children create a fire safety checklist for their homes. Some suggested points to be covered include having working smoke detectors outside the kitchen, furnace area and attic, having a fire exit plan (and a backup plan) and a predetermined family meeting place, checking for overloaded extension cords, flammable liquids, space heaters too close to walls, drapes etc., knowing how to dial 911 and give correct information, knowing the hazards of playing with matches and lighters, etc. Discuss with the children why it is necessary to have two fire exit plans (in case a fire blocks the first escape route). Make copies of the checklist. As homework, have children complete the checklist and come up with a plan to fix any areas of concern. Students should report their findings to the class.

EXTENSIONS:
-Field Trip-Visit a fire station and/or invite a station personnel to visit the school and explain fire fighting techniques and equipment.
-Current Events-Have students look for fire safety related newspaper and magazine articles to share.
-Art-Have students create fire safety posters to be displayed around the school for fire

safety month (October).
-Drama/Music-Students create and perform skits and songs on various aspects of fire safety.
-Language arts-Have students write fire safety related stories and poems.
-Compose "What am I?" safety riddles about common household items. The riddles should tell how ordinary items can present a fire hazard if not handled properly or used correctly. Encourage the use of fire safety related vocabulary. Example: I can make clothes look neat. I get very hot. I must be shut off when not in use. What am I? (An iron). Students share riddles with classmates and buddies.

TOPIC: "Stop, Drop and Roll"

GRADE LEVELS: First and Third

OBJECTIVES:
-To understand how to put out clothing fires
-To practice the technique before an emergency occurs

MATERIALS:
Candle, jar, match, felt "flames"

PROCEDURE:

Ask the children what they think a fire needs to burn. Accept all reasonable responses. Explain that you are going to do a demonstration to show that fires need oxygen to burn. Use correct match lighting techniques (closing match book cover, and striking away from your body) to light the candle while telling the children that lighting matches is something that should only be done under adult supervision. Each family will have rules about when a child is allowed to use matches, but every child should use matches safely as you are demonstrating. Let the candle burn for a minute, and then ask the children to predict what will happen if you put the jar upside down over the candle. If any child predicts that the candle will go out ask them if they know why that will happen. Demonstrate and after the candle has gone out explain that fires need oxygen to burn. We cannot see oxygen, but we know that the fire used up all the oxygen in the jar when it went out.

Just as the candle needs oxygen, so do clothes that are on fire. We can prevent clothing fires by never wearing loose clothing near an open flame, such as when cooking. Children have a tendency to respond to a clothing fire by running for a parent or other adult. Because air feeds the fire, running increases the clothing fire and worsens the bodily injuries. If we are ever unfortunate enough to have our clothing catch on fire we should use the "Stop, Drop and Roll" technique to smother the flame. Demonstrate the technique by placing a red felt flame on your clothing or a child's clothing. The person wearing the flame should drop to the ground, cover the face with hands keeping elbows close to the body, and roll back and forth several times. Wrapping the body in a coat, blanket , carpet or towel as you roll will help smother flames.

Each child should role play situations where this technique might be necessary and should practice several times. Have the older children teach their buddies through demonstration and role playing.

HEALTH FAIR

A health fair is a wonderful way to bring attention to the health teaching effort. Our school ran a school-wide health fair that involved children, teachers and parents in a variety of activities. Each grade developed one or two activities, and the children worked on creating materials for the health fair. In addition the older children actually worked at the station on the day of the health fair.

Our school has 350 students, and we were trying to move all the children through all the stations within a 3 hour prescribed time frame, so we used two rotations of 9 stations with 10 minutes alloted per station, and groups of students moving on to the next station at a predetermined signal. Schools with fewer students, more time, or more activities could offer a more flexible schedule where the children are allowed more freedom to chose the stations they visit and the order they visit them. Evaluations sent in by teachers, parents and children after our health fair indicated a general positive reaction to the health fair, with the major criticism being the rigid schedule and lack of freedom to explore at will. The increased exposure to a variety of health and safety topics, and community spirit was considered beneficial to all who attended.

The stations that we used for the health fair are the following:

1. Fire Safety

The room was set up with 3 different areas. In the first area children learned to crawl under smoke, by crawling under black crepe paper strung between two rows of desks. When they emerged from the cloud of smoke a felt red “flame” was attached to their clothing, and the children learned to “stop, drop and roll” to put out the fire. The children then moved on to a third area where a red mark was made with a washable marker on their finger to symbolize a burn. By plunging their finger into a container of cool water the student learned that “cool water cools a burn” and they got rid of the pretent burn.

2. Health Jeopardy

Based upon the popular television show by the same name, this game was set up with questions in four categories: hygiene, fitness, nutrition, and safety; and questions at four levels of difficulty. A game board was made by using a plastic pocketed page meant to hold slides, with the questions typed on paper the size of slides and covered by opaque paper with numbers indicating levels of difficulty. This was projected on an overhead projector onto a screen. The third graders ran the game, calling on contestants who had their hands raised. Each class was able to play one round of health jeopardy during their visit to this station.

3. Heart Hopping Madness Obstacle Course

This obstacle course with a variety of activities for participants was set up in the PE space. Participants entered and had their resting rate pulse taken by a parent volunteer using a pulse meter. The number was recorded on a sticker which the child wore. Then the child engaged in about 8 minutes of vigorous activity beginning with

10 jumping jacks or jills, followed by a crab walk across several gymnastic mats, then a bunny hop through a cone maze, followed by 10 tuck jumps, "Lily Pad leaps", jumping rope, and finally bouncing back to the parents with a pulse meter on a hoppity ball. The child's pulse was measured again after exercise, and the number recorded in a different color on the sticker.

4. Head Lice Information and Prevention Tips

The school nurse manned a station on head lice. Included at this station was presentation of a highly informative short video distributed by Nix, microscopes with slides of the life stages of lice (eggs or nits, empty egg case, young louse and adult louse), pictures of people with head lice and with flaky scalps to help differentiate the two, and various product samples. After viewing the video the nurse answered questions, and instructed children on ways to prevent head lice transmission.

5. Safety Riddles

First graders wrote and illustrated a number of safety riddles. The writings and pictures were displayed along a hallway where the teacher could read them to the class and have the children guess the answer to a series of riddles. Examples of riddles are "My red means stop, my green means go, my yellow means take it slow. What am I?" (A traffic light). " If there is an emergency, these numbers you call. Help will be sent in no time at all. What am I?" (9-1-1)

6. Safety Bingo

Laminated cards with pictures of 16 safety signs (exit, do not enter, hospital, speed limit, etc.) in different order were created. Each child was given a card and a set of counters (coins, beans, or tokens). The leader has a set of the signs cut up and placed into a basket. The leader pulls a sign from the basket and shows it to the children. Each child places a marker over that sign, and the first to get four markers in a row (vertically, horizontally or diagonally) shouts "Bingo".

7. Bike and Roller Blade Safety

Students in second grade created a video and a series of posters of ways to be safe while enjoying various recreational activities. Students visiting this station viewed the video and asked questions of the students manning this station.

8. Dental Care

Second grade students worked with the classroom teacher and drama teacher to compose a skit about a visit to the dentist's office. Children role played patient and dentist, acted out having the teeth cleaned and inspected, and even role played being "teeth" while being flossed with a large ribbon.

9. Healthy Snacks

The third grade students researched healthy snack options, focussing on some new and different foods that students may be less familiar with. They discussed availability of foods with the school's dietician. Then, as a class they voted on which foods would be offered at the fair. The final list included starfruit slices, kiwi slices, yogurt covered pretzels, banana chips, chickpeas, dried apricots, dates and coconut milk. On the day of the fair third grade students had an opportunity to work at this station. Each child wore an apron and gloves. Students with long hair had it tied back. Jobs involved the following: giving out handiwipes so that all participants could clean their hands before having a snack, preparing the foods into snack sized portions, manning the tasting table by explaining about the different snacks and encouraging students to taste new foods, refilling the tasting table with food, keeping a tally chart of the favorite foods of students, and clean up to keep an eye on any trash generated by visitors to the tasting station.

When visitors were done tasting snacks at this table they also had an opportunity to play bean bag toss into a large food pyramid with holes cut out at each level.

All students walked through a "Watch Out Web" which was a large web created from string, from which dangled student's drawings of a number of safety dangers such as not wearing a seatbelt, running out into the street after a ball, standing under a tree in a lightning storm etc.

At the end of the health fair each student received a pledge to sign stating that they had participated in the health fair, and that they pledged to "promise to practice healthy habits and to share my knowledge about health with others".

A school considering organizing a health fair might have many additional stations. There are numerous health related organizations that will provide materials and assistance for school health fairs, such as the American Heart Association, the National Dairy Council and the American Cancer Society. There are computer games, videos, and other audio-visual media that would be beneficial to include at a health fair. Also, parents and/or community members with particular expertise in a health or safety related field might provide assistance with stations such as hearing or vision screenings, dental information, or fire fighting clothing and equipment.

HEALTH TIPS

Our school has a weekly newsletter for parents. In each newsletter we run a column entitled “Health Tip of the Week”. Wherever possible we have tried to have weekly tips correspond with National initiatives such as “Safe Kids Week” or “American Heart Month”, and to make tips seasonally appropriate. While Lyme disease or sledding injuries may not be issues for all schools, most of these tips address universal issues for parents of young children. We do not use all of these tips each year, but pick some to run each week. Some tips we feel are important enough to run every year, since repetition never hurts, and also each year the parent population is somewhat different.

We have compiled these tips from a variety of sources including summaries of newspaper and journal articles, summaries of recommendations from various organizations aimed at promoting health and safety in young children, and parent recommendations.

September

HEALTH TIP OF THE WEEK-Introduction

Young children are learning health habits which will shape their lives. It is essential that we, as teachers and parents, provide them with enough information and self-esteem to make good choices about their nutrition, fitness, hygiene, exposure to drugs and safety issues. Health is a many faceted issue which may be taught by a variety of teachers in a variety of disciplines.

There is an African saying that "it takes a whole village to raise a child", and we certainly feel that it takes many different adults to teach children to make good choices affecting their health.

At school children are taught lessons on safety, nutrition, hygiene, germs and diseases, and drugs by the school nurse.

The grade level teachers promote mental and social health through self-esteem building activities such as "star of the week", birthday recognitions, and highlight the importance of families and communities. In addition teachers at each grade level cover particular topics such as the five senses and how they keep us safe, fire safety, and nutrition.

The sports teachers emphasize fitness at all grade levels, and also teach classes on recreational safety and fire safety. The science teachers emphasize the scientific bases for good nutrition, exercise, avoidance of drugs and poisons, cleanliness, and the need for appropriate rest in maintaining healthy bodies.

Many of the choices that children face will be made during hours they are away from school. Therefore, it is considered to be essential to have parents as partners in this process of implementing a health curriculum. One method of educating parents will be through this column of health related "Tips of the Week" in the weekly newsletter to parents. Tips will be collected from suggestions submitted by the Health committee, by children and by parents.

The goal of any health program would be for all the children to become healthy, abits in our children? We welcome feedback, comments and suggestions!

September

HEALTH TIP OF THE WEEK

*(Many of our students are brought to school in carpools, so we feel it is important to run a reminder about carpool safety each fall at the beginning of the school year. Other schools may want to remind parents to teach children about pedestrian safety and school bus safety)

Carpool safety rules:

1. Children should be dropped off under the portico for safe exit into the school. Please be patient and wait your turn.
2. Each child and adult must be properly buckled into the car with a safety belt or child safety seat.
3. Pick up children by the portico entrance, but please drive around to the parking lot if your passengers need assistance in buckling up.
4. Each carpool should only have the maximum number of passengers that can safely fit in the car and be buckled into place.

HEALTH TIP OF THE WEEK

HYGIENE-September is National Head Lice Prevention Month

Children play and work closely together; therefore lice outbreaks occur frequently in schools, especially primary schools. Be sure you check your child's head for nits (eggs) and lice (usually difficult to see as they scamper quickly to get our of the light). Lice prefer to feed on clean scalps.

Things to consider if your child has lice:

1. If your child has asthma, allergies or neurologic problems always check with your pediatrician before shampooing.
2. Follow all directions carefully on the special shampoo/conditioner treatments.
3. Nit removal is the most important step and will pass quickly if two people work together and the child has a book to read or video to watch. Be sure to use a bright light or have plenty of sunlight.
4. Check small sections of the hair at a time and remove all nits (eggs). There is always the potential for reinfestation.
5. Clothes, linens, toys, backpacks, etc. need to be laundered in hot water and dried. Items not washable should be dry-cleaned or vacuumed (including all upholstery in the home and car).
6. Wash or discard combs, brushes, hats and hair accessories. Remember diligent care initially will prevent reinfestation.
7. Pillows, dolls and stuffed animals may be "bagged up" for two weeks.

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The goal of any health program would be for all the children to become healthy, responsible adults, able to function at their highest potential. The true test is obviously the test of time-have we really succeeded in instilling lifelong health habits in our children? We welcome feedback, comments and suggestions!

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HEALTH TIP OF THE WEEK

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In the last 15 years epidemics of head lice have become commonplace in schools.In fact, lice is the most prevalent childhood communicable disease among American children. Lice show no regard for education, social class or degree of cleanliness. Check your children for headlice on a regular basis, at least once a week. While usually relatively easy to treat by over the counter medicine, concerns have been raised about the toxicity of some of these medicines (specifically those containing lindane) and the effects of repeated exposure.

In 1996 the California Department of Health Services warned in a report that there is "circumstantial evidence" of increased head lice resistance. That could explain why some public health officials are seeing a dramatic increase in head lice outbreaks. The lice are harder to get rid of, hence people are carrying them for longer periods of time and this increases the chance of infesting others.

To avoid the hassle and worry of dealing with lice encourage your children to never share headwear, combs or brushes. If lice are detected treat promptly following directions carefully. Children should not return to school until they are nit free. Head checks are done routinely.

October

HEALTH TIP OF THE WEEK

FIRE SAFETY-OCTOBER is fire safety month

Review with your family a fire exit plan, and have a practice fire drill. Plan where to meet outside of the home. Remind children to "Stop, Drop and Roll" if their clothes catch fire, and not to run. They should crawl under smoke. Check smoke detector batteries. Young children should never play with matches, fireworks, lighters etc. Older children will often exhibit a strong interest in fire, and you should instruct and supervise carefully a child's experimentation with fire, including lighting candles. Demonstrate caution when using matches and lighters in front of children. When the clocks are turned back, change the battery in the smoke detector.

HEALTH TIP OF THE WEEK

Ways to avoid accidental burns:

1. Keep children at a distance from hot liquids.
2. Avoid using a tablecloth if toddlers are in the home. They may pull on the tablecloths and accidentally spill hot liquids on themselves.
3. Keep all hot items near the center of the table, at least 12 inches from the edge.
4. Use caution while cooking, making sure children are at a safe distance and do not try to reach up onto the stove and touch a hot burner or pot.
5. Keep appliance cords away from counter edges.
6. Keep pot handles turned in.
7. Hot water should be set at 120^{o}-125^{o}F to avoid accidental scalds.

HEALTH TIP OF THE WEEK

In case of fire:

1. Have a fire emergency plan established in your home.
2. Stay low to crawl under the smoke.
3. If possible cover your mouth and nose.
4. Feel the door. Do not open it if it is hot. (Try a window or other opening). If the door is not hot, lean against it and open it very slowly.
5. Stay low and crawl out the quickest and safest route.
6. Once out stay out. Do **not** go back into a burning building.
7. Never use elevators in a fire, use the stairs.
8. Escape first, then call for help.

HEALTH TIP OF THE WEEK

Avoiding Chemical and Electrical Burns

1. Store all detergents, cleaning agents, bleach and other chemicals out of reach or in a locked cabinet. Use childproof caps when available.
2. Use "Mr. Yuk" stickers to signify poison or danger to children. Call the National Capital Poison Center at 202-362-3867 to get a supply. For a poisoning emergency call 202-625-3333.

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3. Whenever possible purchase household chemicals that contain less dangerous substances. Read all labels.
4. Keep ipecac syrup in the house in case of accidental ingestion of chemicals.
5. Use plug covers in electrical outlets.
6. Limit the use of extension cords.
7. Keep electrical cords out of the way.

HEALTH TIP OF THE WEEK

Apple Cider and Health Concerns

Apple cider is a wonderful part of the fall season. Unfortunately apple cider can contain the bacteria E. Coli and can cause illness. To avoid possible illness be sure that apples have been washed and brushed when making your own, or buy pasteurized cider.

Another reminder: drinking fruit juices in large amounts can lead to diarrhea in children.

HEALTH TIP OF THE WEEK

Halloween Safety Tips

To keep your Halloween from being a "ghoulish" experience remember to follow these safety tips:

-always trick or treat in groups
-wear reflective clothing
-don't pick up food from the ground
-wait to eat candy until you get home, and then inspect all food carefully
-make sure all wrappers are intact
-use moderation in consuming sweets

Following this advice should give you plenty of treats but few tricks. Happy Halloween!

HEALTH TIP OF THE WEEK

November

Cold weather Wear:

Now that cold weather is here be sure children are dressed appropriately for the season. Children need hats to help maintain their body temperature. Gloves or mittens keep the hands and fingers warm. Scarves warm the neck and face; asthmatics should keep a scarf over the mouth when it is cold outside to help warm the air before it reaches the lungs.

Leather or rubber shoes or boots are great to keep the feet and toes warm and dry. Snow clothes are advised on those days when playing in the snow will occur at school. Please check the wind chill factor and be sure children are protected from the weather.

*(We usually run the tips on colds and on rest at about this time of year. These tips can be found at the end of this section in the part labelled “Tips for anytime of the Year”.)

December-Holiday safety

HEALTH TIP OF THE WEEK

Preventing Poisonings from Holiday Plants

Some holiday plants are poisonous if parts are chewed or swallowed. Most cause vomiting and diarrhea, but some can cause more serious problems.

Toxic plants include:
-Mistletoe: all parts are toxic, but the small white berries are particularly dangerous.
-Jerusalem Cherry: the fruit is very toxic.
-Yew: all parts are toxic.
-Boxwood: Leaves and twigs are especially toxic.
-Holly: berries and all parts of the plant are toxic.
-Poinsettia: may cause abdominal cramps and irritation of the skin and eyes if ingested.

If poisonings are suspected call the local poison control center at (202)-625-3333.

Keep your holidays joyous by avoiding poisonings. Keep toxic plants out of reach of small children and pets. Have a safe holiday!

HEALTH TIP OF THE WEEK

Avoiding Holiday Hazards:

Keep your season joyous by avoiding accidents. Be aware of how the following items pose dangers to young children:
-lights and candles are tempting: keep candles on a high, inaccessible, sturdy surface.
-fragile decorations (tree ornaments, etc.) can cause cuts or pose choking hazards. Try to keep delicate ornaments out of the reach of children.
-holly leaves and berries can cause nausea, persistent vomiting, diarrhea and in **RARE** instances may be fatal. Use this plant with caution.
-mistletoe leaves, stems and berries can cause gastric upset, nausea and vomiting and diarrhea. Place this plant so berries and leaves do not fall within reach of children.
-poinsettias may cause abdominal cramps and irritation of the skin and eyes if ingested. Keep out of reach of children.
-keep the local poison control center number handy in case of accidental poisoning: National Capital Poison Center (202)-625-3333

HEALTH TIP OF THE WEEK

Winter Health Tip

Safe Sledding Rules:
1. Avoid crowded hills.
2. Check hills for visible and hidden obstacles such as bumps and holes.
3. Never sled alone-have a buddy.
4. Make sure that there is adult supervision.

Other sledding tips to consider:

1. Snow tubes generally move at a faster speed and are difficult to steer. Some children are actually bounced off of these sleds and are injured from the fall. Use greater caution with snow tubes.
2. Bike helmets should be worn for sledding. The incidence of head trauma from children sledding is increasing.

HEALTH TIP OF THE WEEK

Winter Health Tip

A new health hazard that children (and pets) face during the winter month is injury from de-icing salts made from calcium chloride. Children can receive burns from handling these crystals. A child in Switzerland placed some crystals in his pants pocket. Several days later a rash appeared, and burns on his thigh which required skin grafts. Be sure to caution children not to handle these "crystals". Try to avoid salts on your walks if you have pets, wash pets paws carefully if contact does occur so that they will not lick paws and ingest the salt or receive burns. Store containers of de-icing crystals out of the reach of children. Have a safe and healthy winter!

HEALTH TIP OF THE WEEK

Bike Helmets-In the Winter?

Bike helmets aren't just for bicycling. Helmets should be worn anytime there is a potential for head injury. Helmets absorb and distribute the impact of an accident before it harms the brain. About 750,000 Americans are injured every year during informal recreation activities such as horseback riding, skiing, sledding, various types of skating and playground activities, as well as cycling. To prevent head trauma wear a helmet. A helmet that fits properly will not slide around or pull off when buckled and should sit on top of the head. To have fun and be safe remember to wear your helmet!

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Hints for Healthy Eyes:

1. Try not to rub your eyes. If you must, use a clean tissue and not your fingers.
2. Never stare directly at the sun.
3. Read in a good light, preferably coming from over your shoulder.
4. Wear protective goggles when you may be exposed to flying objects or particles such as balls,wood chips,dirt or sand.
5. If you wear glasses, use sports goggle during sports activities to prevent facial and eye injuries.
6. Have your eyes checked yearly.

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Signs of visual problems
-rubbing eyes repeatedly
-holding head at an angle while reading
-frowning, squinting or blinking frequently
-shutting or covering one eye to focus
-holding books closely
-avoiding close work
-complaining of headaches after reading
-repeatedly confusing right-left -directions
-writing in a crooked and poorly spaced manner
-losing interest in activities quickly
-sitting too close to the television

Many learning related visual problems do not surface until the upper elementary grades. If your child exhibits 3 or more of these symptoms a comprehensive eye exam is recommended.

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Hints for Healthy Eyes:

Protect your children from ocular (eye) injuries. Approximately 100,000 sport related eye injuries occur annually. The sports most frequently associated with eye injuries are as follows (in order of frequency): baseball, basketball, and racquet sports. Many of these injuries can be prevented with the use of appropriate eye-wear and sports goggles. Sports eye wear should be made with polycarbonate lenses; these lenses offer the most impact resistance. Clear UV lenses also provide protection from the sun's harmful rays for outdoor play.

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Hints for Healthy Eyes:

Most adults didn't wear sunglasses when they were kids, but times have changed. Scientists have now learned that the earlier children start wearing sunglasses outdoors the better their chances of avoiding major eye health problems, like cataracts and macular degeneration, later in life. Loss of some of the ozone layer is letting more harmful UV rays reach the earth. Children are often exposed to more UV radiation because they play outside more than adults, and their young eyes let more UV rays in. Children should wear sunglasses that keep out both UV-A and UV-B radiation. Wide brim hats can also help keep radiation from reaching the eyes (not to mention skin).

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Reduce eye strain and fatigue sometimes caused by computer screens or video display terminals:

-break periodically to rest your eyes
-adjust the screen for the best contrast
-reduce glare
-position the screen 16-22 inches from your eyes

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Eye Development and Vision

Children develop different vision skills as they grow. These vision skills are needed to help the child with reading, coordination of fine motor skills, as well as hand-eye coordination for playing sports and riding bikes. You can help with vision development by providing opportunities for safe climbing, balancing activities, and use of playground equipment. Read with your child and discuss the illustrations. Have your child point to objects on the page. Have your child cover one eye and look at a picture. Can they describe what they see? Have your child cover the other eye. Do they see the same objects? Eye coordination is essential for correct vision. Your child may display signs or symptoms of poor eye coordination including covering one eye to see, skipping lines or losing place while reading, poor sports performance, avoiding tasks that require close work and tiring easily. While some of these are developmentally appropriate consult the list of symptoms published last week to determine when it is necessary to take your child for a visit to the eye doctor.

HEALTH TIP OF THE WEEK

January-National Eye Health Month

Blink, Blink, Blink

Most people, especially those working on their computers, forget to blink. A study by the National Institute of Occupational Health and Safety shows that almost 90% of people employed to work with computers for more that 3 hours a day suffer from eye strain. People forget to blink, causing their eyes to dry. Symptoms may develop such as itching or burning eyes, blurred vision, or double vision.

Helpful hints include:

1. Blink
2. Avoid glare on the computer screen. Don't keep a bright light behind the computer screen, and don't put your computer in front of a large window.
3. Take a 10 minute break every hour.

HEALTH TIP OF THE WEEK

February-National Children's Dental Health Month

Brush and Floss for a Healthy Smile

1. Use a soft toothbrush. (Hard brushes contribute to gum disease).
2. Begin with the outer teeth surfaces and angle the brush.
3. Use short strokes to clean the inner surfaces of the back teeth.
4. Use gentle up-and-down strokes for the inner surfaces of the front teeth
5. Use small back-and-forth strokes to clean the chewing surfaces
6. Use dental floss once a day, gently sliding it between the teeth with a sawing motion.
7. Brush at least twice a day.
8. Replace your toothbrush every 3-4 months
9. Remember with small children use only a pea-sized amount of toothpaste and caution them to try not to swallow toothpaste.
10. Smile every chance you get!

HEALTH TIP OF THE WEEK

February-National Children's Dental Health Month

Throw away those old toothbrushes with the bristles sticking out at odd angles and buy a new toothbrush for Dental Health Month! Old toothbrushes not only store germs, but they are not as functional in helping to clean your teeth. Be sure your children brush their teeth a minimum of twice daily with a toothpaste containing fluoride to help prevent cavities. Remember to keep your teeth healthy and avoid reinfecting yourself with a cold by discarding old toothbrushes and replacing with clean new brushes.

HEALTH TIP OF THE WEEK

February-National Children's Dental Health Month

Teeth require daily cleaning (brushing/flossing), good food and regular check-ups to stay strong and healthy. Teeth help us to eat and speak properly - was it difficult to say some words when you lost your two front teeth? What about biting into an apple? Healthy teeth help keep our bodies healthy.

It is possible for a child to grow up cavity free. Some dentists suggest the application of sealants to permanent molars, check with your dentist. Proper tooth brushing is essential to having healthy teeth. Only a pea-sized amount of tooth paste is necessary. Be sure to brush all surfaces of the teeth, and brush your tongue too! Rinse your mouth with water after brushing. Floss between teeth and rinse again. Keep your smile beautiful

HEALTH TIP OF THE WEEK

February-National Children's Dental Health Month

Dental Injuries: Prevention and Care

Properly fitted mouth guards have been proven to prevent over 95% of all dental injuries. It is recommended that anyone participating in a contact sport should wear a mouth guard. Mouth guards should be inspected regularly for cracks, breaks and bite throughs as well as proper fit.

If a dental injury is suspected:
-Try to find out how the injury occurred
-Check for bleeding in the mouth or lips
-Check to see if any teeth appear to be out of place or a different size
-Check to see if there are any loose or missing teeth (With young children a "baby" tooth may already be loose or missing, an injury to an adult tooth is much more serious)
-Check to see if the mouth can be opened and closed without pain to the jaw
Coming next week: Treatments for Dental Injuries

HEALTH TIP OF THE WEEK

February-National Children's Dental Health Month

Treatments for Dental Injuries
If a dental injury has occurred:
-stop the bleeding with pressure (use a gloved finger or gauze)
-use ice to decrease pain, swelling and bleeding
-reposition displaced teeth with gentle pressure
-if a tooth is knocked out keep it moist and get the child to a dentist immediately. The tooth should be soaked in milk if available, or sterile saline solution (like contact lens wearers use) or if neither of these are available use tap water. Time is of the essence-replanting a tooth if 90% successful if done within 30 minutes of an injury.
-have the injured child breath through their nose, keeping their mouth closed
-keep the child calm, and give treatment as quickly as possible

HEALTH TIP OF THE WEEK

February-American Heart Month

Healthy Heart Tips

Heart disease often begins in childhood and gets worse as children grow up. It can exist with no outwardly visible symptoms, but conditions such as high blood pressure and high levels of blood cholesterol may be detected. It is possible to prevent heart disease if your child learns healthy habits young. A diet that is high in fiber and low in fat, vigorous exercise for 30-60 minutes at least 3 times a week and plenty of rest are the best valentines your child's heart could get!

HEALTH TIP OF THE WEEK

February-American Heart Month

Regular physical activity helps improve strength and endurance, build healthy bones and muscles, control weight, reduce anxiety and stress, increase self-esteem and may improve blood pressure and cholesterol levels. Parents can help their children establish healthy habits for life by encouraging your child to be physically active, by volunteering to help your child's sports teams and recreation programs, by being physically active with your children, and by teaching your children safety rules and making sure they have clothing and equipment necessary to participate safely in physical activity. Parents can set a good example for children by being physically active, making healthy eating choices and not smoking.

HEALTH TIP OF THE WEEK

February-American Heart Month

Be Active Now to Avoid Osteoporosis Later

Osteoporosis is a painful, disfiguring disease affecting 25 million people in the United States alone, 80% of whom are women. The best way to reduce the risk of osteoporosis includes a regimen of physical activity combined with adequate calcium intake. The earlier in life these habits are started the more effective they will be. Studies have shown that bone growth in the hip may reach its peak by age 16. School age physical activity may represent the best prevention against this crippler. As the weather improves think about how you will fit physical activity into your family's schedule.

HEALTH TIP OF THE WEEK

February-American Heart Month

Your heart pumps blood through 60,000 miles of blood vessels, and beats about 120,000 times a day. You can help take care of this amazing organ by eating a healthy low-fat diet, exercising regularly, and by getting the proper amount of sleep. Your heart needs to rest also, and it beats more slowly while you sleep. Give your body a valentine, be good to your heart.

HEALTH TIP OF THE WEEK

Happy Hearts

Hearts are happy when they are strong and healthy. Hearts are also happy when you are happy. Take the time to give hugs and say "I love you" from the heart.

HEALTH TIP OF THE WEEK

Hazards from passive smoking

Studies have concluded that there are hazards from passive smoking, or second hand smoke. Children exposed to passive cigarette smoke may suffer health hazards, and they have no choice in the matter. Studies indicate that "the use of tobacco products by adults has an enormous adverse impact on the health of children". Children should be excluded from designated smoking areas and given every opportunity to live (and breath) in a smoke-free environment.

March

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Encourage your children to eat a variety of foods. Have a rule that everyone at least has to taste a new food. However, if someone doesn't like the food they shouldn't be forced to eat it. Offer one new food at a meal. Have your child help you select and prepare foods. Children tend to eat foods they have helped make. Don't serve only your children's favorite foods, make sure you have other foods to try also. Last, but not least-Set a good example with your own eating.

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Name all the food groups (without looking). Check the food pyramid, or better yet have your child tell you what they have learned. How many vegetable servings do you get each day? Study some nutrition labels from your family's favorite foods with your child. How do they fit into your overall healthy eating plan? Try a different fruit each day this week. Remember to eat at least 5 fruits and vegetables each day.
(run a picture of the food pyramid with this tip)

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Facts about Fiber

Fiber is an important part of our diet to promote regularity, and to reduce the risk of certain cancers. In the past there was no formal dietary recommendation for children for fiber. Recently a recommendation was made for children aged 3 to 18 that the number of grams of fiber they should consume per day is their age plus five. (For example, a six year old would need about 11 grams of fiber a day, 6+5=11). Foods which are high in fiber are fruits, vegetables, nuts, and grains such as wheat, corn, rice and oats. Many foods high in fiber have the additional benefit of being high in vitamins and minerals as well.

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Encouraging Health Eating Habits

The last decade has seen dramatic increases in both the number of children (and adults) suffering from obesity, and also the number of eating disorders. Establishing healthy eating habits needs to begin with very young children. By modeling healthy eating habits yourself, offering a variety of healthy foods for meals and snacks, and avoiding mealtime battles you can launch your child on a lifetime of healthy eating. Encourage children to take a taste of new foods, but if they do not like the food do not force them to eat it. If you decide to lose weight, focus on improving eating habits, not mentioning "dieting" in your discussions with family.

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Healthy eating is easy: eat less of the foods that are high in fat or sugar; eat more of the foods that are high in fiber. That's easy enough to remember! Don't forget we need 6-8 glasses of water every day.

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Food Habits Start Young

Children are not born with the ability to choose a nutritious diet. Their food habits, like those of adults, are learned through experience. Parents are children's first teachers. During the early years parents can teach their children healthy eating habits by setting an example. It is important to offer a variety of foods, emphasizing nutritious food and moderating a child's intake of less nutritious foods. Probably the key to avoiding future food problems is not to make an issue about particular foods, but to keep offering a variety of foods.

Your library and bookstore offer many children's cookbooks with suggestions for delicious and nutritious snacks and meals. Preparing a meal together and eating together as a family is wonderful "quality time" and helpful in establishing good eating habits for life. Eating together fosters healthy family dynamics and relationships and helps promote healthy eating habits for the whole family.

HEALTH TIP OF THE WEEK

NUTRITION-March is Nutrition Month

Calcium

In the summer of 1997 the headline news in many newspapers was that the federal government and a panel of distinguished scientists recommended increasing the amounts of the mineral calcium people consume each day. Children between the ages of 9 and 18 should get 1300 milligrams per day, and children between the ages of 4 and 8 need 800 milligrams per day. Milk, yogurt and cheese are all excellent sources of calcium. But what can you do if you do not tolerate milk? You still need calcium, so make sure to drink calcium fortified orange juice, eat broccoli, tofu, Chinese cabbage and kale.

Calcium helps build and maintain strong bones and teeth. It also helps to regulate your heart rhythm, maintain regular sleep patterns, helps blood to clot and helps your kidneys clean your blood. For a fun family challenge keep track of how much calcium you each consume in a 3 day period, and see if you meet the new guidelines.

April

HEALTH TIP OF THE WEEK

Ticks

Now that the warm weather is returning the children will be spending more time outdoors playing and exploring. Knowing more about tick-borne diseases and their prevention is important. Lyme disease is the most common tick-borne disease in the U.S. It is an inflammatory disorder caused by a bacterium usually carried by the deer tick.

Common signs to look for:
-a rash around the tick bite like a bull's eye
-fatigue
-chills and fever
-headache
-muscle and joint pain
-swollen lymph nodes

Some symptoms may show up much later, weeks or months after the tick bite. If you or your child develop any of these symptoms, see you doctor for diagnosis and treatment. Recovery rate is best with early treatment.

*Coming next week: Tick Bite Prevention

HEALTH TIP OF THE WEEK

Tick Bite Prevention

Protect yourself and your family from tick bites. Ticks are not likely to spread disease if removed within 24 hours. Follow these tips while hiking or otherwise enjoying the great outdoors to avoid tick bites:
-avoid tick-infested areas, especially in May, June and July
-wear long sleeves, pants and hat
-tuck pant leg into socks or boots. Tuck your shirt into the pants.
-tape the area where socks and pants meet, so ticks cannot crawl under clothing
-spray insect repellent containing DEET or permethrin on clothing or exposed skin (do not spray in face)
-walk in the center of trails.
-after being outdoors remove and wash clothes and dry at a high temperature. Inspect your body carefully, especially along the hairline, tops of boots and under shirt collars.
-Be careful, be safe, and HAVE FUN!

*Coming next week-tick removal

HEALTH TIP OF THE WEEK

tick removal

To conclude our tips on ticks-how to properly remove a tick if bitten. Follow the steps outlined by Health Focus from the Centers for Disease Control and Prevention.
-with tweezers, grasp the tick as close to the skin as possible.
-pull straight back with a steady force.

-avoid crushing the tick's body or touching blood or fluids from it.
-store tick's body in jar of alcohol for possible assistance in diagnosis
-remove any broken parts.
-wash the area with soap and water.
-call your physician if a rash or any flu-like symptoms occur within the next few weeks.

HEALTH TIP OF THE WEEK

Lyme Disease Reminder

1. Ticks are most likely to attach themselves to people in May or June.
2. Deer ticks (which carry Lyme Disease) are very small and should not be confused with the larger dog tick.
3. If a circular rash or flu-like symptoms appear following a tick bite, consult your medical doctor.
4. Be smart when hiking or when in tick infested areas:
    a. conduct a tick check at the end of every day, including on the scalp.
    b. wear a hat.
    c. wear white or light colored clothing to make seeing ticks easier.
    d. wear long pants tucked into socks.
    e. use insect repellents as directed and spray onto clothing.

HEALTH TIP OF THE WEEK

Bee Stings

Bee stings are a common problem, and now that the weather is warming up the bees are emerging. In order to reduce the severity of the reaction it is important to make sure the stinger has been removed as quickly as possible. This stops the injection of venom. There used to be controversy over the most effective way to remove a stinger. New studies have shown it does not matter HOW it is removed as long as it is done soon after the sting. The stinger may be removed by squeezing it with tweezers or fingernails and pulling it out, or by scraping it off with a credit card or fingernail. The hive-like reaction following a sting is larger the longer the stinger is left in, so remember that quick removal of the stinger is key!

May

HEALTH TIP OF THE WEEK

DRUGS-May 1-7 is drug awareness week

The children have been learning that there are two kind of drugs, medicines and other kinds of drugs, some that are legal and some not. The children have bee told that they should take medicine only from certain people such as a parent, doctor or nurse. Children have been taught never to take medicine by themselves, never to use a friend's medicine, and never to take medicine from a stranger. Please stress to your child that breaking any of these rules can be harmful to health.

HEALTH TIP OF THE WEEK

SAFETY-May 6-13 is National Safe Kids Week

The leading health risk facing American children today is accidental injury. While it is impossible to prevent all accidents, many can be prevented by teaching and enforcing safety rules.

STREET CROSSING

First graders have been taught how to cross a street safely, and now is a great time to review the procedure with all children. Children need to be taught to cross only at stopwalks and not in the middle of a street. They should learn to look left, then right, then left again. Remind children to wait for the WALK sign, or for a car to stop at a stop sign. Encourage children to make eye contact with the driver of a car to be sure that they have been seen.

HEALTH TIP OF THE WEEK

SAFETY-May 6-13 is National Safe Kids Week

SUN SAFETY

Second graders have been taught a good rule of thumb for sun safety: if your shadow is shorter than you are tall you need to cover up from the sun. The hours at the middle of the day when the sun is high overhead are worst for the rays which cause premature aging of the skin and cancer. Keep your children well covered with sunblock, clothes which block out sunlight wearing hats to shade the face, or encourage them to play in the shade or even indoors during the midday hours. Research shows we have received 90% of the sun damage we will get in our lives by age 20. Your children will thank you for your care in the years to come.

HEALTH TIP OF THE WEEK

SAFETY-May 6-13 is National Safe Kids Week

911

Does your child know how to dial 911 and correctly give your address to summon an emergency vehicle? Tell them this: If you need to use a pay telephone you won't need money to have the call go through. Tell the person who answers the phone what happened and where you are, be prepared to answer some questions and follow directions. If you don't understand tell them so, and don't hang up or put down the phone unless you are told to do so.

It's worth rehearsing a few pretend situations to practice this skill so that your child is prepared for the possibility of needing to use it. Newspaper accounts of young children saving lives by knowing how to summon help attest to the importance of teaching this skill.

HEALTH TIP OF THE WEEK

SAFETY-May 6-13 is National Safe Kids Week

Sun Protection

Melanoma and other skin cancers are rare in children, but intense exposure to the sun as a child increases the risk of skin cancer as an adult. It is important to protect our bodies from the sun.

1. Use a good sunscreen with a minimum SPF of 15.
2. Apply appropriate amount of sunscreen and reapply as indicated on the directions. (Long acting water proof lotion is helpful and reduces the need for reapplication).
3. Be sure to cover the areas burned most often: nose, ears, cheeks and shoulders.
4. Avoid sun exposure during 10 am-3 pm when the sun's rays are strongest and most harmful.
5. Most of the sun's rays pass through clouds. Reflections off the water, sand and snow increase sun exposure.
6. Wear approved sunglasses (blocking 99% UV)
7. Wear a hat with a brim.
8. Adults-set a good example for the children. Be safe in the sun!

HEALTH TIP OF THE WEEK

SAFETY-May 6-13 is National Safe Kids Week

Lightning Safety

Spring is here, and so are the thunder and lightning storms. This is a good time to review these tips from the National Weather Service. If a thunderstorm threatens:

-Go inside a large building or home
-Go inside a car and roll up the windows
-Stop swimming or boating as soon as you see or hear a storm since water conducts electricity.
-Stay away from the telephone except in the case of an emergency
-Stay away from telephone poles and trees if you are caught outside
-Stay off hilltops, try to crouch down in a ravine or valley
-Stay away from farm equipment and small metal vehicles, such as motorcycles, bicycles, and golf carts
-Avoid wire fences, clotheslines, metal pipes and rails, and other conductors of electricity.
-Stay several yards apart if you are in a group

HEALTH TIP OF THE WEEK

Lightning Safety

Teach your children how to be safe if a lightning storm comes when they are out playing or involved in after school sports.

-Watch the sky and plan a safe place to go when a storm approaches.
-Large buildings like schools and your home are safe
-Lone trees are targets-stay away
-Keep away also from water, metal things like pipes and bicycles. A car is a safe place to be even though it is made of metal because the rubber tires act as insulators.

It is good to teach your children a healthy respect for lightning. Lightning kills more people each year than tornadoes, hurricanes or floods. Ten times as many people are killed by lightning each year as by snakes. It is important that all children are prepared to act safely and correctly if there is a threat of lightning.

HEALTH TIP OF THE WEEK

Heat Illness

The leading weather related killer is NOT a tornado, hurricane, nor lightning-it is the HEAT. During a normal summer hundreds of Americans die from the heat. Heat with high levels of humidity increase the risk of heat illness. High heat paired with high humidity can be as dangerous as extreme cold. The body cools itself by the evaporation of sweat. If the humidity is high the evaporation process is slowed. When the humidity is high the body tires easily, the heart works harder and prolonged exertion or exercise is more difficult.

June

HEALTH TIP OF THE WEEK

Kids and Water Safety

Keep kids safe near the water this summer. Drownings can occur in a matter of seconds.

-If you own a pool have a fence that encompasses the pool, and have safety equipment available.

-Never leave children under the age of 4 alone near tubs or pools or open areas of water.

-Learn CPR

-Children need to learn to swim. Children ages 5-12 are old enough to learn the rules for safe swimming.

-Children should never swim alone or without adult supervision.

-Use caution when diving. Be sure the water is deep enough.

-Be smart and have fun in the water! Have a happy and healthy summer!

HEALTH TIP OF THE WEEK

Sun Protection

Summer means lots of outdoor fun, which means lot of sun exposure. Prolonged sun exposure can lead to serious skin damage, skin cancer, cataracts of the eyes, and other health problems. While these problems are rare in children, we now know that intense sun exposure in childhood increases the risks of problems in adult life. Some helpful information:

1. Sunlight is strongest between 10 AM and 3 PM
2. Water, sand and snow intensify the sun's rays
3. Clouds do not stop the sun's rays
4. Babies under 6 months should stay out of the sun
5. Use a sunscreen with SPF rating of 15 or more
6. Wear sunglasses (meeting the UV rating)
7. Wear a hat
8. Wear clothing to protect your skin
9. Take breaks in the shade.

Have a great summer and remember to be sun smart and sun safe.

Tips to Run Anytime

HEALTH TIP OF THE WEEK

Dangers of Food Allergies

Many prepared foods and snacks contain food items which are not expected. For example, some granola bars contain peanut butter, but the bars are not called peanut butter flavored. Some chocolate chips contain nuts or peanut butter. If your child, or one of your child's friends has a food allergy to nuts or peanuts be especially cautious, and read all label ingredients. Some food allergies can be deadly! Before serving snacks or meals always ask if anyone has a true food allergy. Be smart and be safe!

HEALTH TIP OF THE WEEK

Asthma

One out of every 15 children in the United States has asthma, and the numbers are growing. Asthma is a condition that causes swelling and obstruction in the airways of the lungs. During an asthma attack, the muscles surrounding the airways swell, tightening the airway. Also, the lining of the airways swell and form a sticky substance which further acts to constrict the airway. These reactions make it difficult to breath in, and especially out.

"Asthma" is Greek for "panting". During an attack a person makes wheezing sounds and coughs. These sounds occur as the air passes through the constricted airways. Many things can trigger an asthma attack, such as pollen and other allergens, scents, dust, exercise and cold weather.

There are now medications, known as inhalers or "puffers", that work directly on the airways in the lungs. Some of these medications prevent an asthma attack from occurring, and others are used in the event of wheezing or "tightness".

If you, or someone in your family has asthma, it is important to use your medication regularly as prescribed by your doctor. Keep your mouth covered with a scarf when you are outside to help warm the air. Keep your house and bedroom as dust-free as possible. Avoid any known "triggers", such as cat fur or tree pollen.

HEALTH TIP OF THE WEEK

Air Bags and Children

Recent reports of children injured or killed when air bags inflate in an accident have been distressing to all concerned. Children can be harmed by air bags in two different situations:

1. Infant or child seated in the front passenger seat is not belted properly or restrained, and is thrown into the inflating air bag, causing serious injury.
2. An infant in a rear facing car seat place inappropriately in the front seat, injured when the air bag inflates.

The U.S National Highway Traffic Safety Administration advises the following rules:

1. Never put a rear facing infant seat in the front seat of a car with a passenger side airbag.

2. Make sure all children are buckled up.
3. The rear seat is the safest place for children of any age to ride.

HEALTH TIP OF THE WEEK

ABC's of Car Safety

"Child auto safety is as simple as ABC." Always Buckle Children in the back seat. Automobile crashes are the leading cause of death in children ages 5-15 years. A study done by the National Highway Traffic Safety Administration concluded that children are safer riding in the back seat. Air bags may be dangerous for small children. Children are at risk if they are too close to the dashboard, unbelted or improperly belted when an air bag inflates. Be safe, always buckle children in the back seat

HEALTH TIP OF THE WEEK

A Cure for the Common Cold?

Children contract on average at least two colds per year. In most cases the common cold is caused by germs transferred through touch. Keeping hands clean by washing them after sneezing, coughing, eating, using the bathroom, playing outdoors, handling an animal etc. can help cut down on disease transmission. Keeping a child who is ill home shows a sense of responsibility and concern for others, and may allow your child to recuperate more quickly than if they are sent to school when sick.

HEALTH TIP OF THE WEEK

Cold Proofing Tips

1. Wash your hands often with soap and water.
2. Use tissues and dispose in the trash immediately. (Wash your hands again).
3. Keep toys and table surfaces clean. 1/4 c. bleach in 1 gallon of water is an effective disinfectant.
4. Don't share cups or eating utensils.
5. Keep sick children separate from others.

HEALTH TIP OF THE WEEK

Sleeping Needs

A good night's sleep helps people **remember more** of what they learn and they are **ready** to learn new things. Sleepy people tend to be "grumpy" and have more accidents. A good night's sleep helps the body to fight off colds and sicknesses. A yawn helps your body take in more oxygen if it is tired. An average 8 year old needs about 10 hours of sleep every night; an average 5 year old needs 11 hours of sleep. As children get older they require less sleep. Be sure your family gets sufficient rest each and every night.

HEALTH TIP OF THE WEEK

Danger: Raw Foods

Be careful when handling raw foods, especially eggs and meat. Be sure to was hands and counter tops carefully with soap and water. Some raw eggs, even refrigerated eggs, carry salmonella bacteria and can be especially dangerous to children. Do not allow children to eat anything with raw eggs. Pasteurized eggs are safest to use. Raw meats may carry E. Coli or other bacteria. Remember to be safe in the kitchen.

HEALTH TIP OF THE WEEK

First Aid for Sports Injuries

Out playing basketball and you twisted your ankle. What should you do? Remember **RICE!**

R= Rest, avoid doing activities that cause pain.
I= Ice, apply ice pack for 20 minutes, several times a day for 2-3 days.
C=Compression, to decrease swelling. (Caution-not TOO tight!)
E=Elevation, elevate the injured area above the heart if possible.

Do not ignore persistent pain, swelling or discoloration. Any traumatic injury to a joint should be examined by a health professional, especially if there is deformity and/or loss of function.

HEALTH TIP OF THE WEEK

Safety Online

As more and more families enjoy access to the Information Highway it is worth reviewing the points in this pledge developed by the National Center for Missing and Exploited Children:

-I will not give out personal information such as my address, telephone number, parent's work address/telephone number, or the name and location of my school without my parents' permission.
-I will tell my parents right away if I come across any information that makes me feel uncomfortable.
-I will not respond to any messages that are mean or in any way make me feel uncomfortable. It is not my fault if I get a message like that. If I do I will tell my parents right away so that they can contact the online service.
-I will talk with my parents so that we can set up rules for going online.

HEALTH TIP OF THE WEEK

Safety Around Dogs

Children and dogs can be wonderful playmates, and your dog may be like another member of the family. Not all dogs are child friendly however, and it is worth teaching your children the following rules:

-Don't pet a dog on a leash without asking the owner if it is OK.
-If a strange dog is running loose ignore it if it is not running up to you.
-If a strange dog approaches you try to be calm and not move. Don't scream, and don't

stare at it. Let the dog smell you, and it will probably leave.
-If a dog does attack, try to protect your your face and neck. Wash a bite with warm soapy water and get to a doctor fast. Report a description of the dog to the local animal control or health department.

HEALTH TIP OF THE WEEK

Stranger Safety

Newspapers, milk cartons and mail flyers remind all parents daily that the world of today can be a dangerous place for children. What can parents do to help their children?

1. Teach your children to "check first". If anyone wants your child to help them look for a lost puppy, have a cookie or go someplace with them make sure your child knows to check first with the adult in charge.
2. Teach your child what to do if they are lost. Role play different situations with your child.
3. Teach your child the difference between a "good touch" and a "bad touch". Any area covered by a bathing suit is personal. Tell your child that no one has a right to touch them in a way that makes them feel afraid or uncomfortable.
4. Teach your child how to say "NO" and to trust their feelings if they sense something is wrong. Encourage your child to tell you immediately.

HEALTH TIP OF THE WEEK

Bicycle Safety

Biking is a wonderful way to get exercise, and reduce pollution when getting from place to place. Keep it a healthy activity as well by following these rules:
-Always keep to the right-on a bike path, and on the street if there is no bike path
-Always look both ways before crossing a street
-Always wear a hard shell helmet approved by ASTM, ANSI or Snell. If you are involved in an accident replace your helmet, since it loses its ability to absorb shock after impact.

HEALTH TIP OF THE WEEK

Playground Safety

The Consumer Product Safety Commission recently released a study on playground safety. Think about these points in relation to your backyard swing set and neighborhood playground.

1. The playing surface should be shock absorbing material such as rubber tile, mats, or a 12 inch deep layer of sand, wood chips, or other loose material, and should extend at least 6 feet in all directions around equipment.
2. The CPSC considers 3 types of equipment unsafe: heavy swings like gliders and animal shaped swings; dangling ropes that could fray or form a noose, and trapeze bars that hang from a chain or rope. They also advise parents to be alert for openings that could entrap heads or feet.

3. The layout of the playground should place equipment at least 12 feet apart to provide space for children to move safely from one place to another.
4. Older public playgrounds often have high levels of lead paint, which poses a lead poisoning hazard for children who put their hands in their mouths after playing.

With parental vigilance a trip to the playground can be a safe and happy experience for all.

HEALTH TIP OF THE WEEK

Family Safety Check List (from the SAFE KIDS campaign)

1. Our family buckles up on every car ride.
2. Our family wears helmets when cycling or skating.
3. Kids under 10 never cross streets alone.
4. Kids are always supervised near water.
5. Our home has working smoke detectors and we check the batteries monthly.
6. Our water heater is set no higher than 120^{O}F.
7. If guns are in our home, they are kept unloaded and locked away.
8. Kids are protected against falls from windows, stairs, and playground equipment.
9. Household cleaners and medicines are stored out of children's reach.
10. Our home has emergency numbers near telephones and first aid supplies.

HEALTH TIP OF THE WEEK

Pesticides and Children

There is a possible link between cancer in children and some pesticides, including fly strips, bug sprays and lawn treatments. In a recent study households using lawn treatments, in particular the chemical diazinon, had a significantly higher number of children with sarcomas and lymphomas. In homes where pest strips were used children had leukemia at 1 1/2 to 3 times the rate of homes without pest strips. This is a preliminary study and warrants further investigation into the relationship of pesticides and herbicides and increased cancers in children.

HEALTH TIP OF THE WEEK

Safety in the Hot Tub

The U.S. Consumer Product Safety Commission (CPSC) has helped to develop standards to prevent hair entanglement and body part entrapment in spas, hot tubs and whirlpools. Families with older hot tubs should have them fitted with new safer drain covers, and all children who enjoy using a hot tub should be aware of the following:

-hot tubs with strong suction have been involved in body part entrapment. Caution children against playing near drains.

-high temperatures may cause drowsiness leading to unconsciousness and drowning. Spa temperature should never exceed 104 degrees, and young children should not stay in for more than 10 minutes at a time.

-children who have played breath holding games in a hot tub have had hair trapped in

drains. Caution children against playing these kinds of games.
Know where the cut off switch is for a hot tub. If you own one make sure it is serviced regularly, covered safely when not in use and supervised carefully when in use.